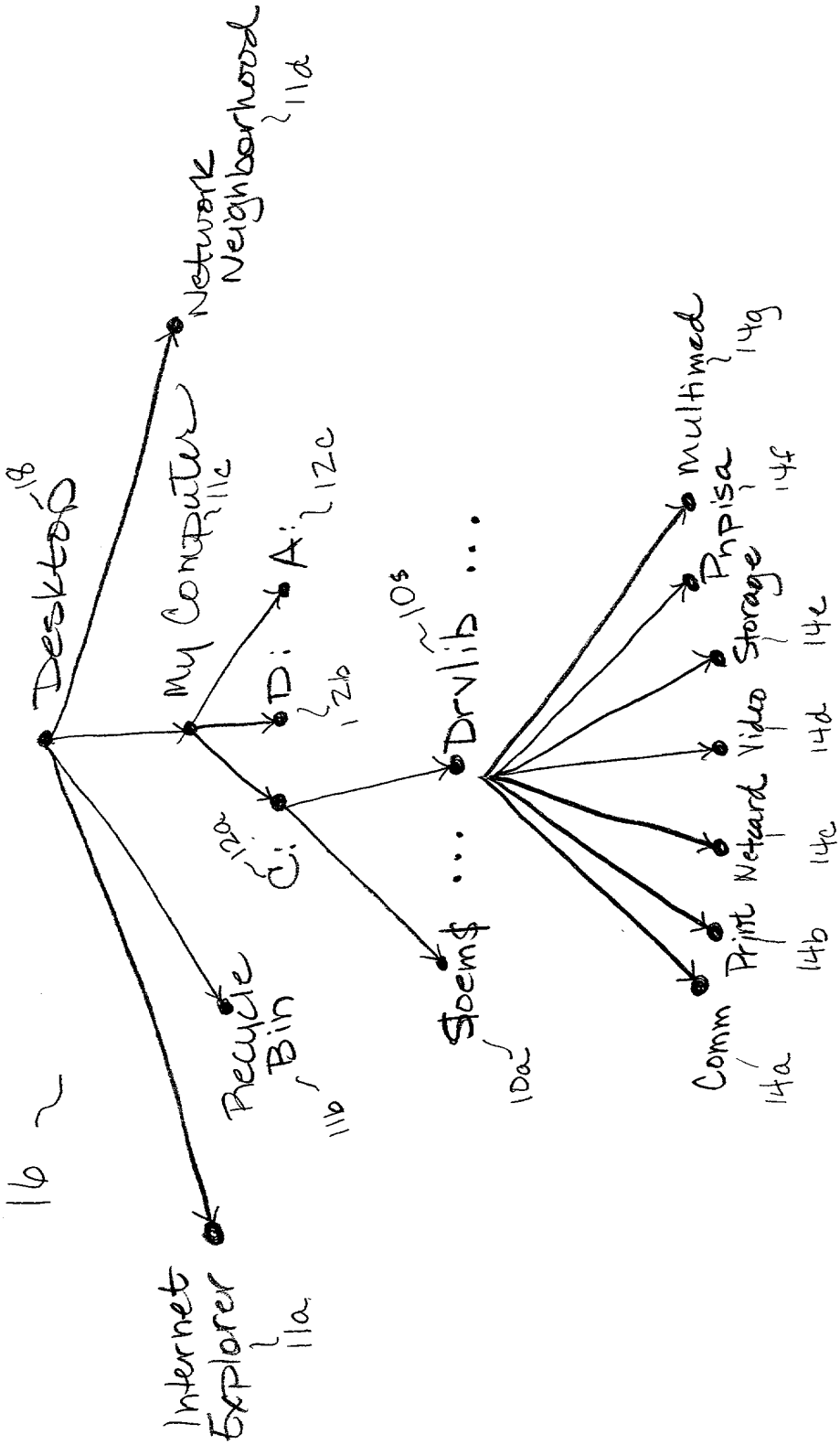


Fig. 1 (prior art)

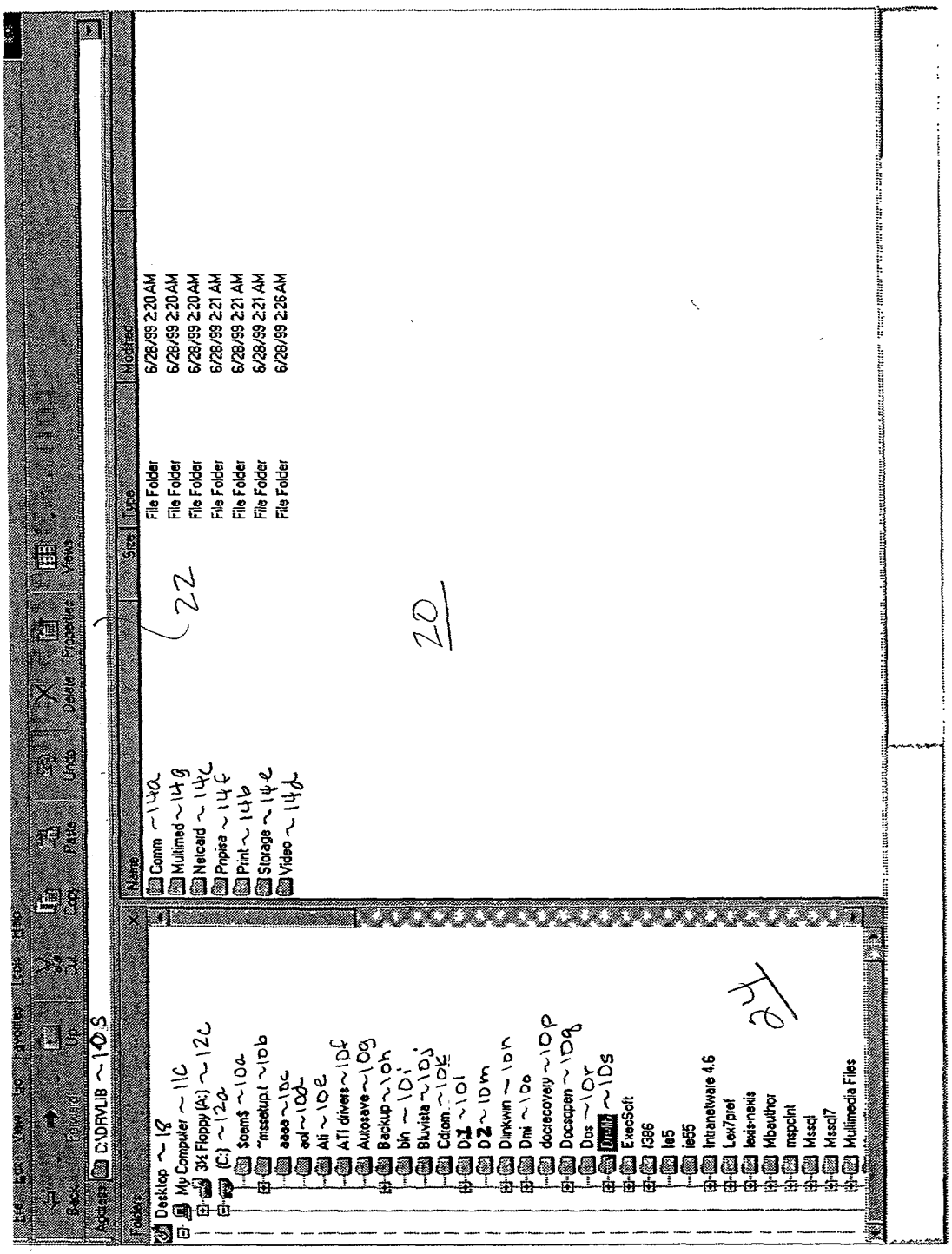


Fig. 2 (prior art)

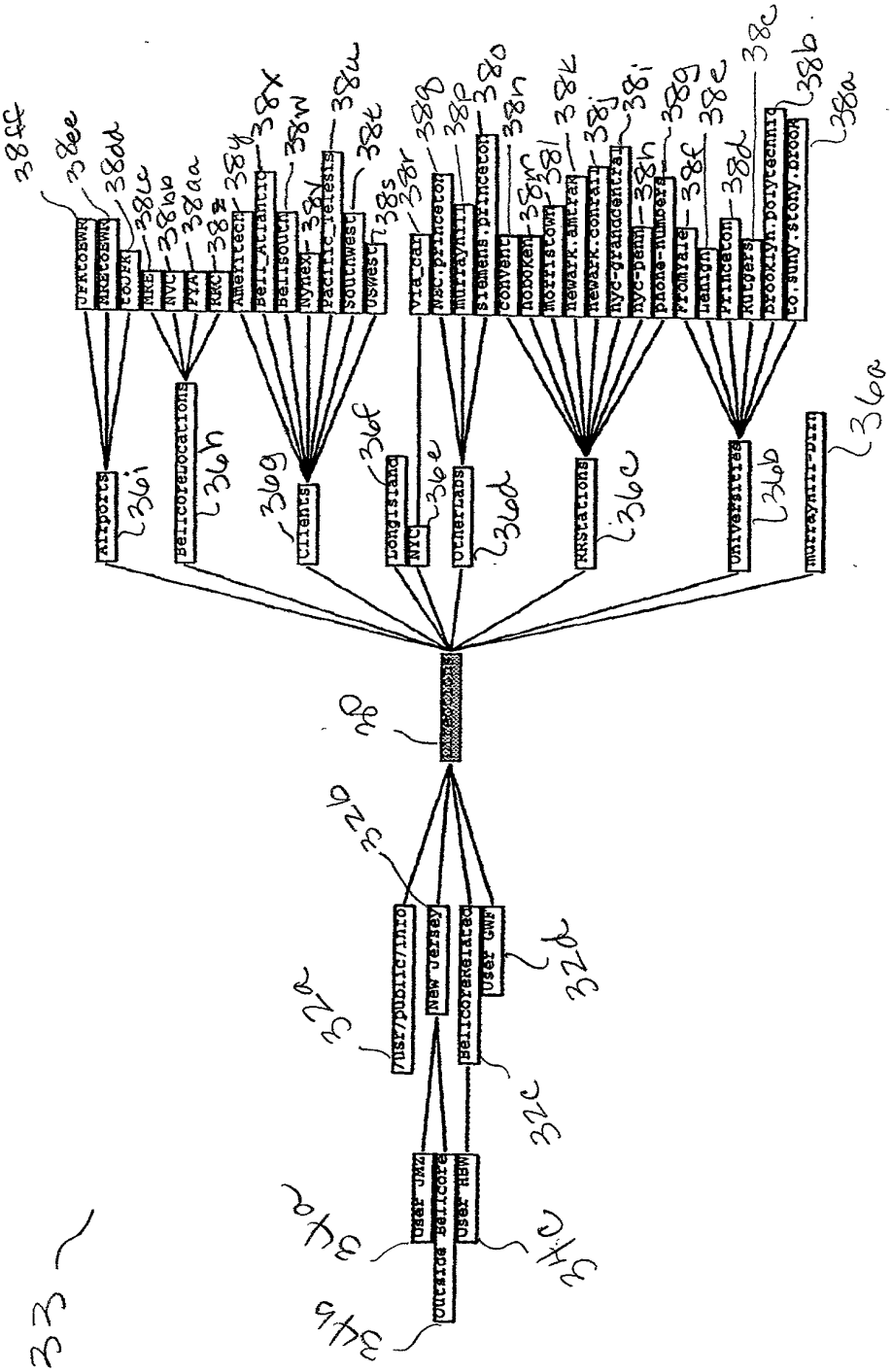


Fig. 3 (prior art)

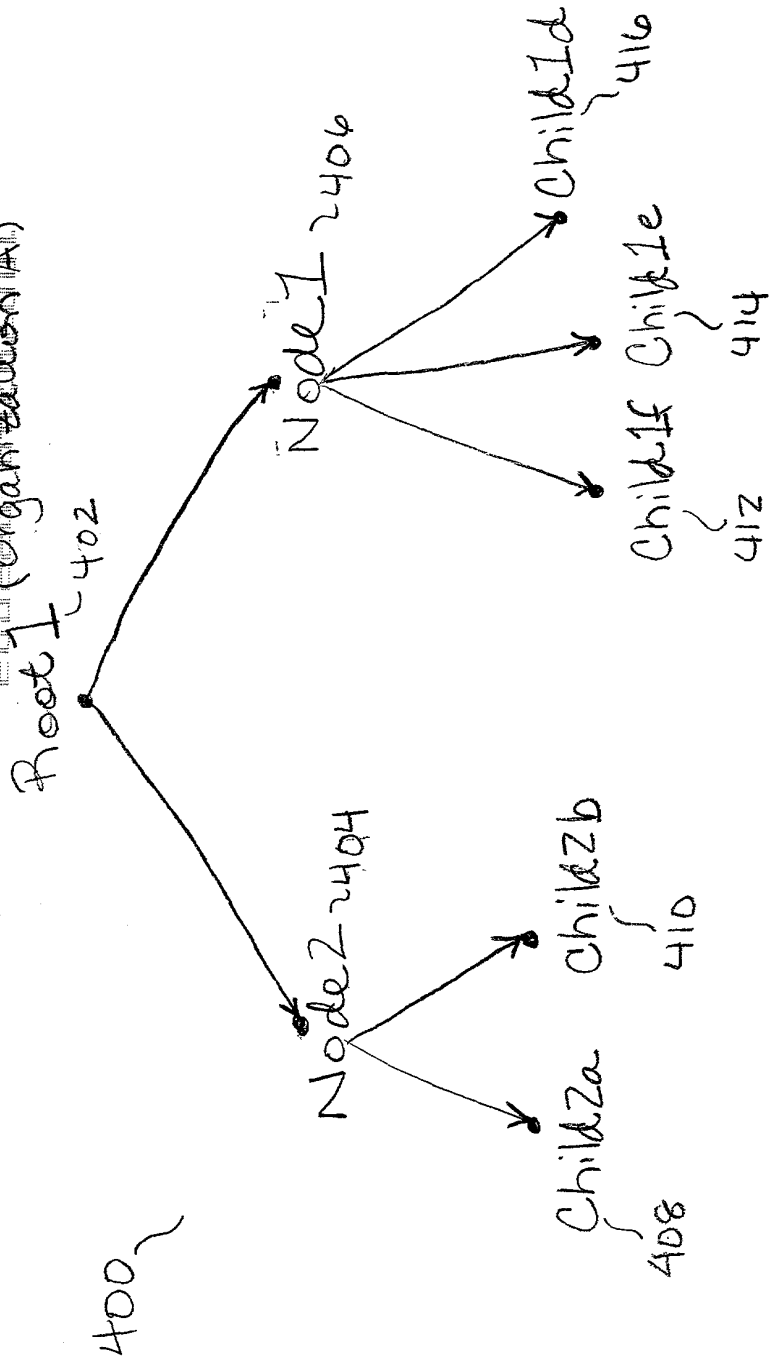

Root 1 (Organization A)
402
Node1 406
Node2 404
Child1a 408
Child1b 410
Child1c 412
Child1d 416
Child1e 414
400

Fig. 4

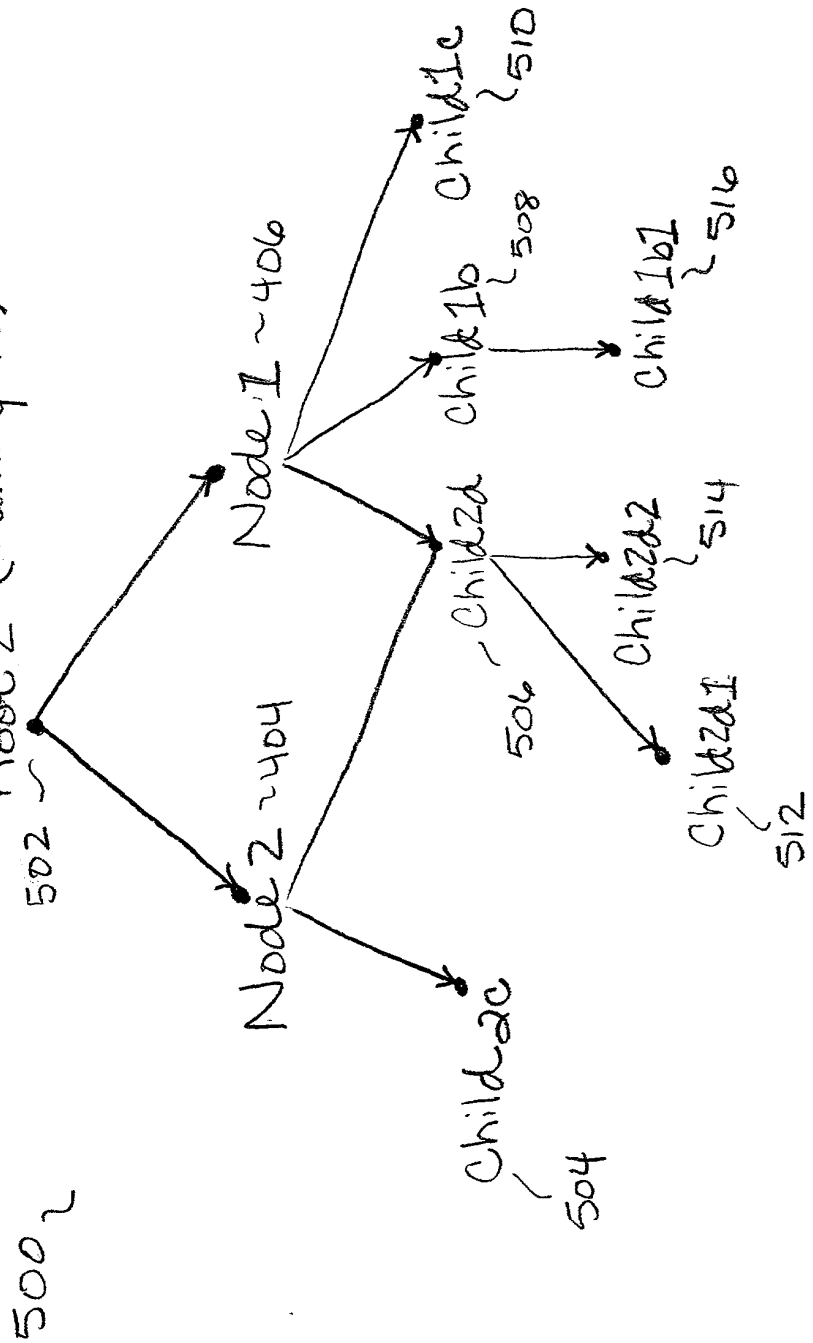

Root 2 (Family AN)
502
Node 1 ~406
Node 2 ~404
Child 1c
510
Child 1b
508
Child 1a1
516
Child 2a
506
Child 2a2
514
Child 2a1
512
Child 2c
504
500

Fig. 5

Approved Sheet

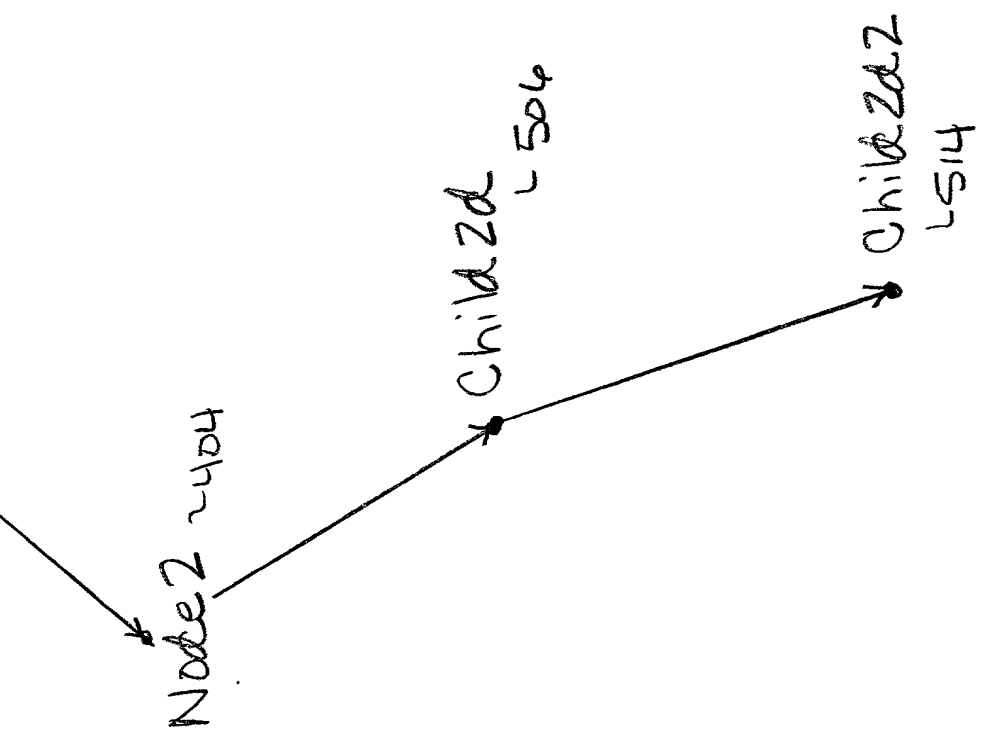


Fig. 5A

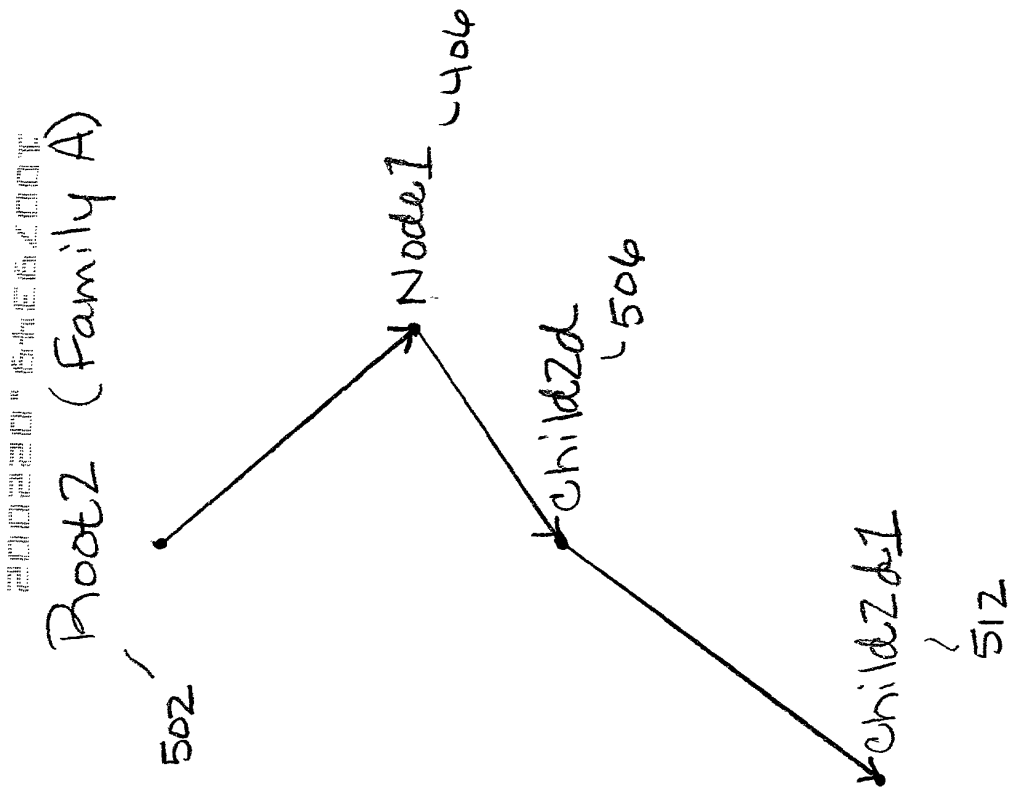


Fig. 5B

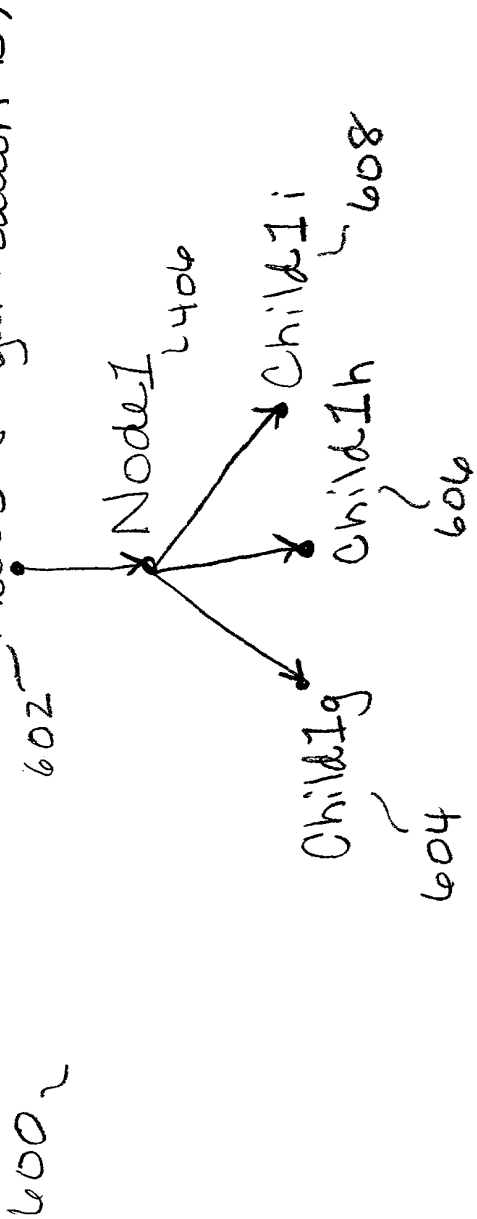

Root3 (Organization B)
602
Node1
406
Child1g
604
Child1h
606
Child1i
608
600

Fig. 6

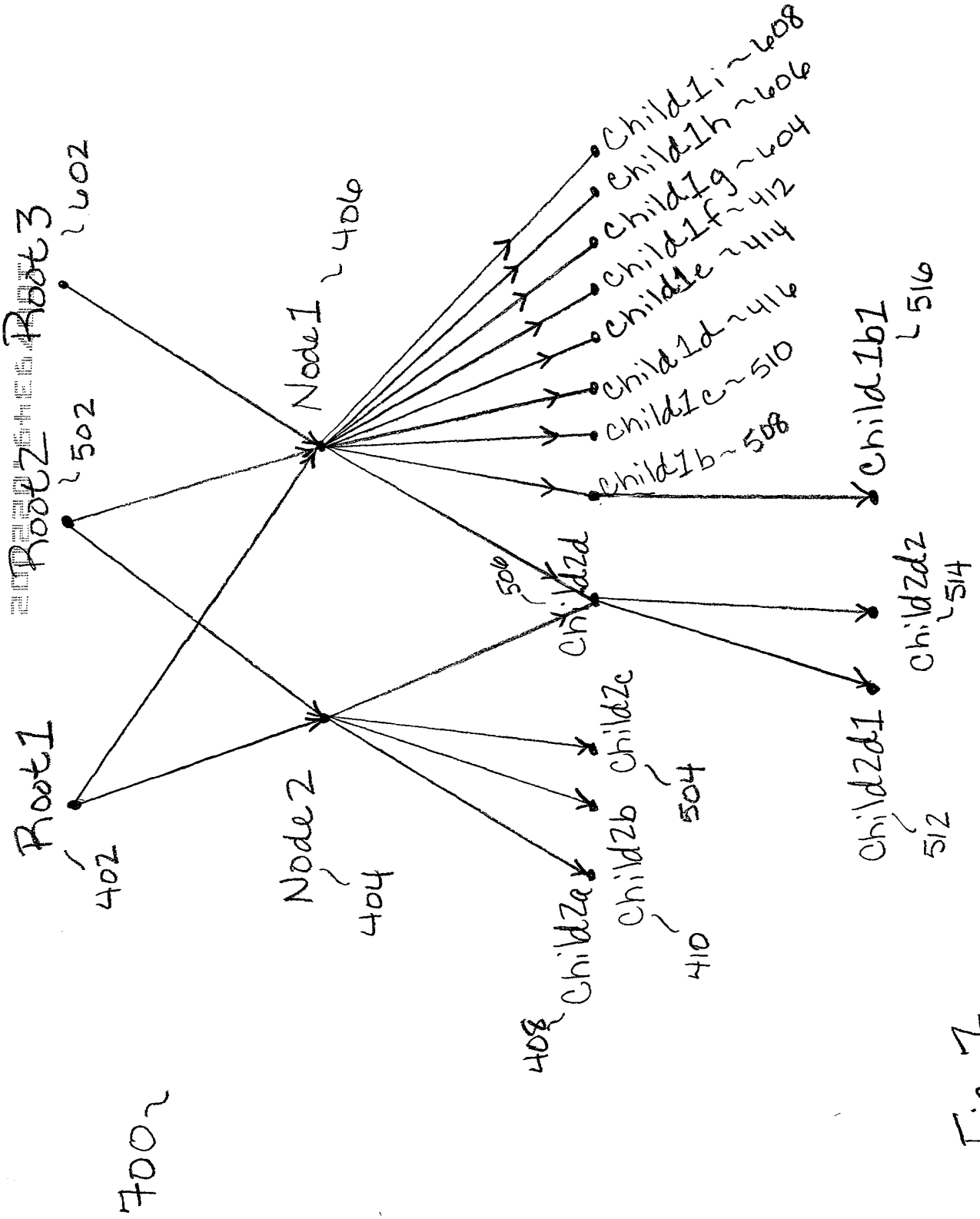

Root1
402
Root2
502
Root3
602
Node1
406
Node2
404
Child1i
608
Child1h
606
Child1g
604
Child1f
412
Child1e
414
Child1d
416
Child1c
510
Child1b
508
Child1b1
516
Child2d
506
Child2d2
514
Child2d1
512
Child2c
504
Child2b
410
Child2a
408
700

Fig. 7

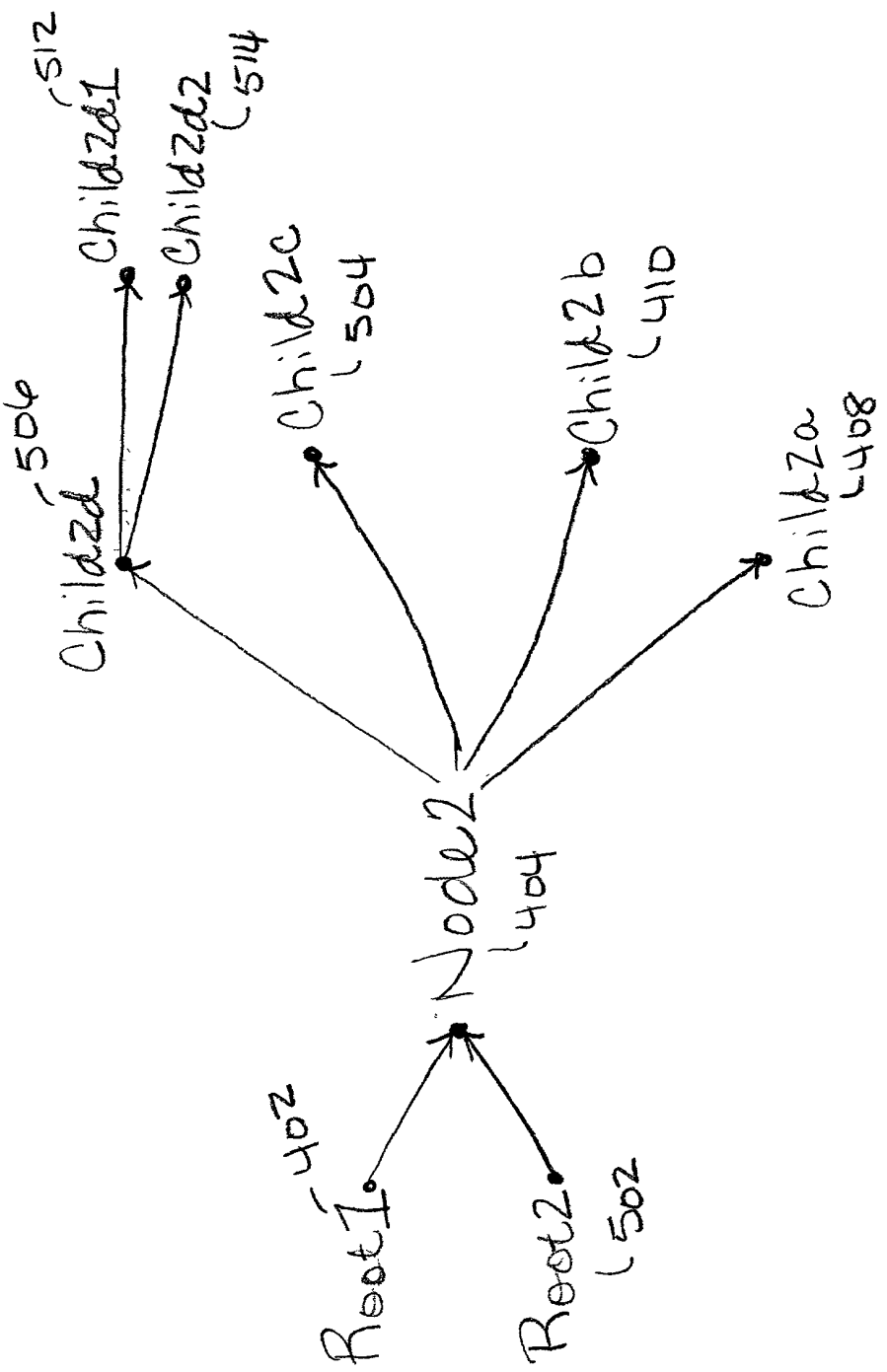


Fig. 8 (prior art)

2006-0926 "Express Mail"

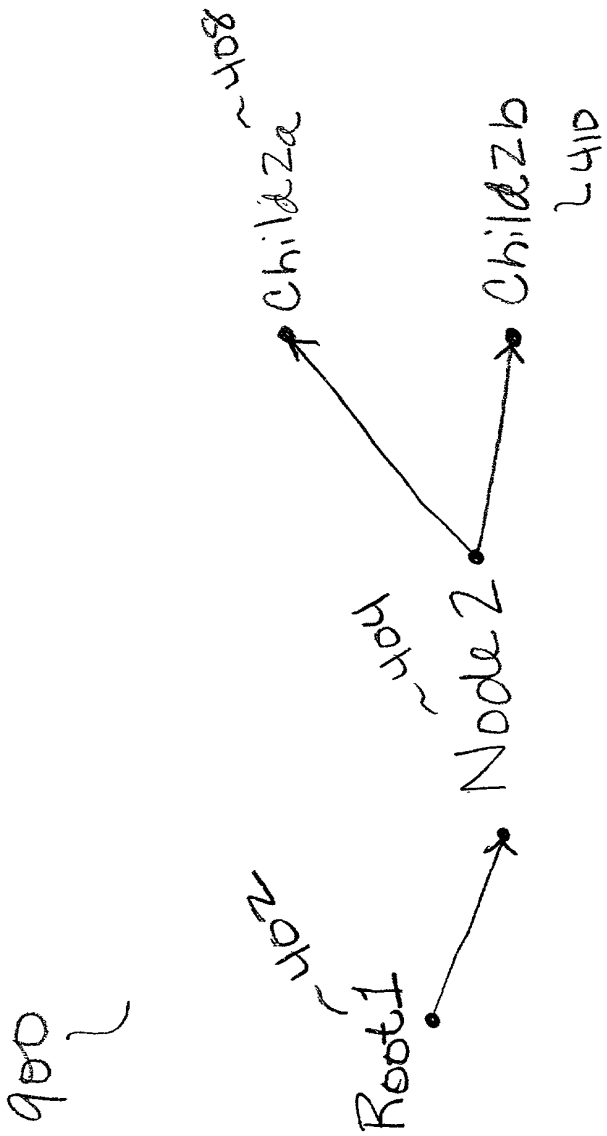


Fig. 9

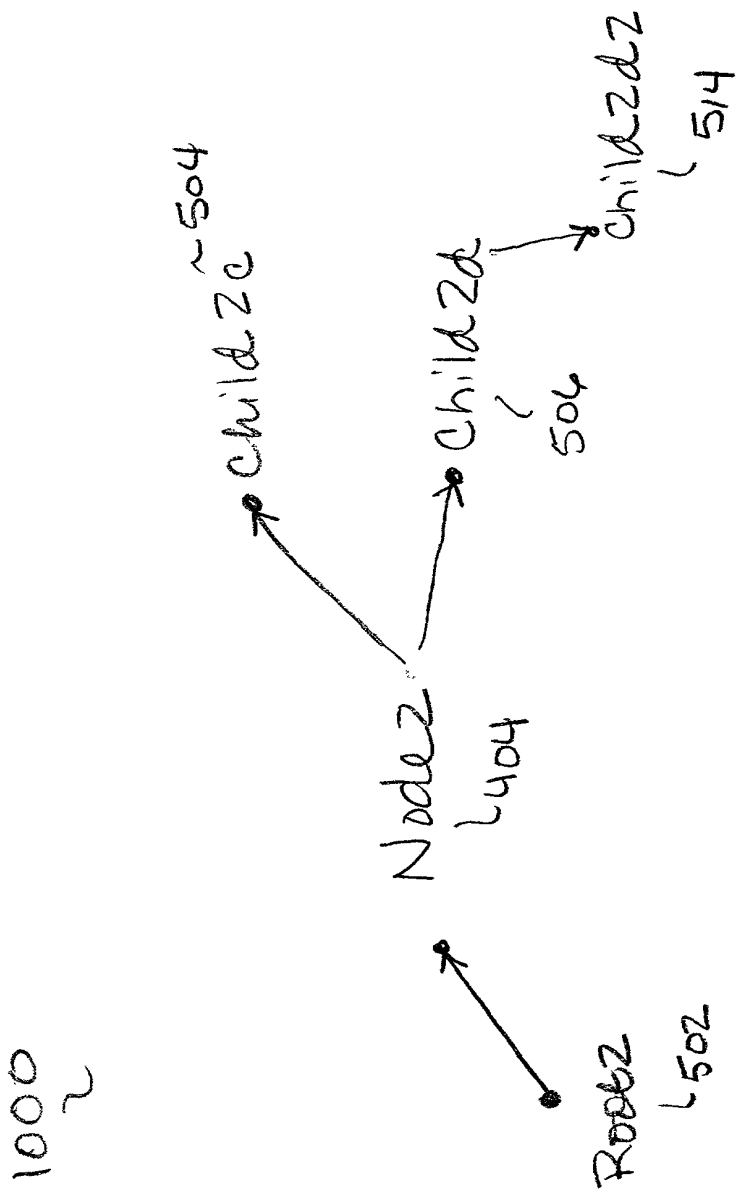

1000
Node2
404
Root2
502
Child2a
504
Child2b
504
Child2c
504
Child2d2
514

Fig. 10

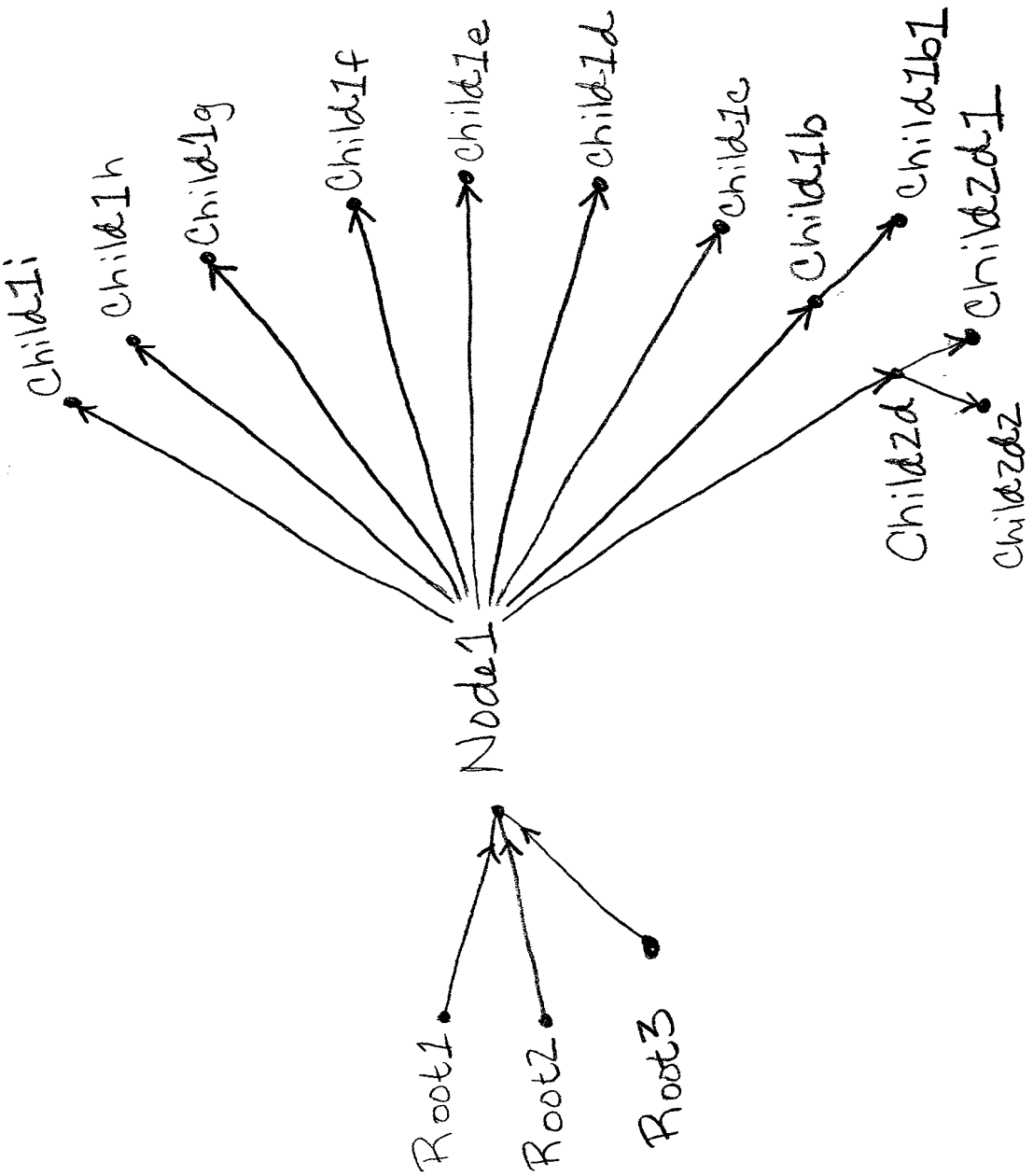


Fig. H (prior art)

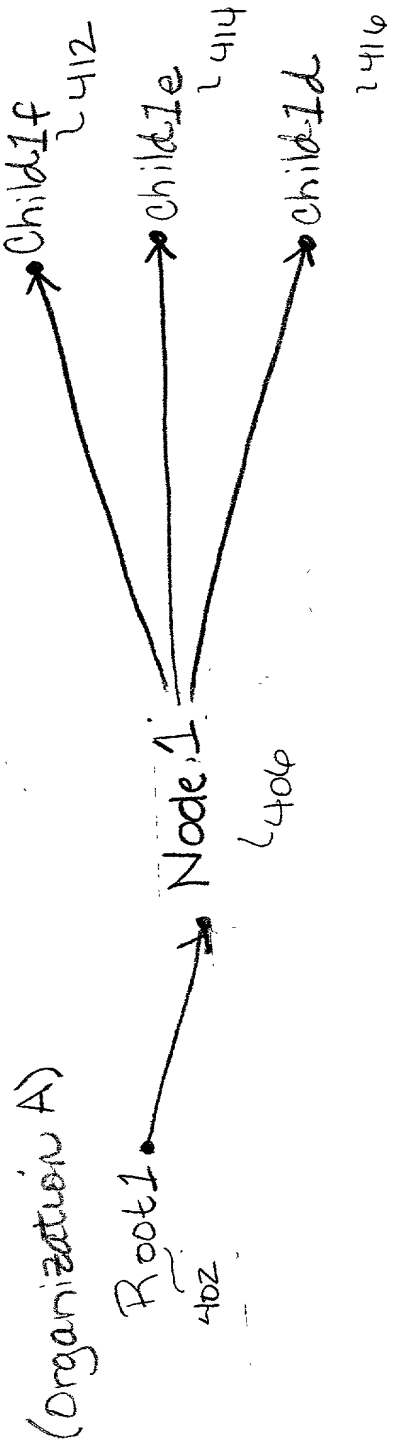

Child1f
412
Child1e
414
Child1d
416
Node1.1
406
Root1
402
(Organization A)

Fig. 12

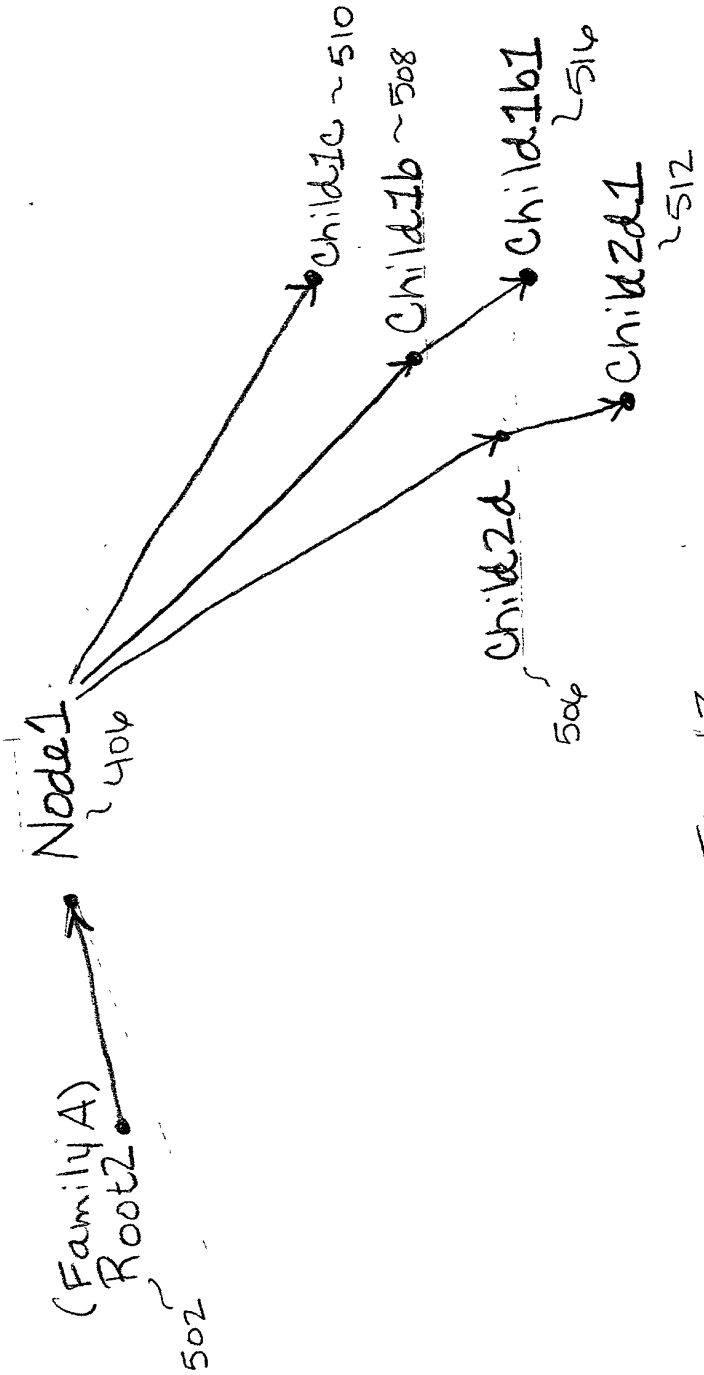

(Family A)
Root2
502
Node1
504
Child1c
510
Child1b
508
Child1a1
514
Child2a1
512
Child2a
506

Fig. 13

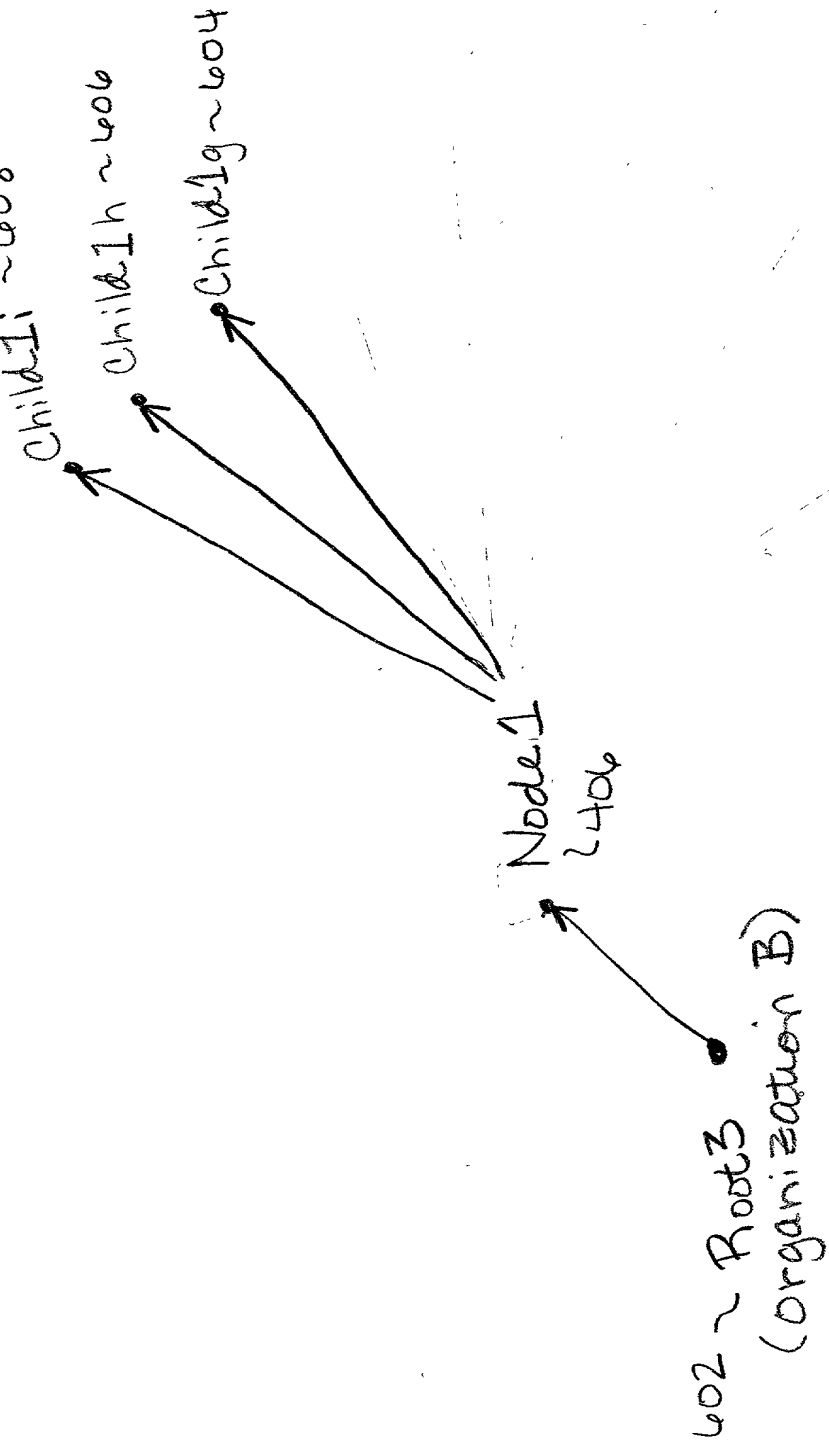

Child1i ~608
Child1h ~606
Child1g ~604
Node1
~406
602 ~ Root3
(Organization B)

Fig. 14

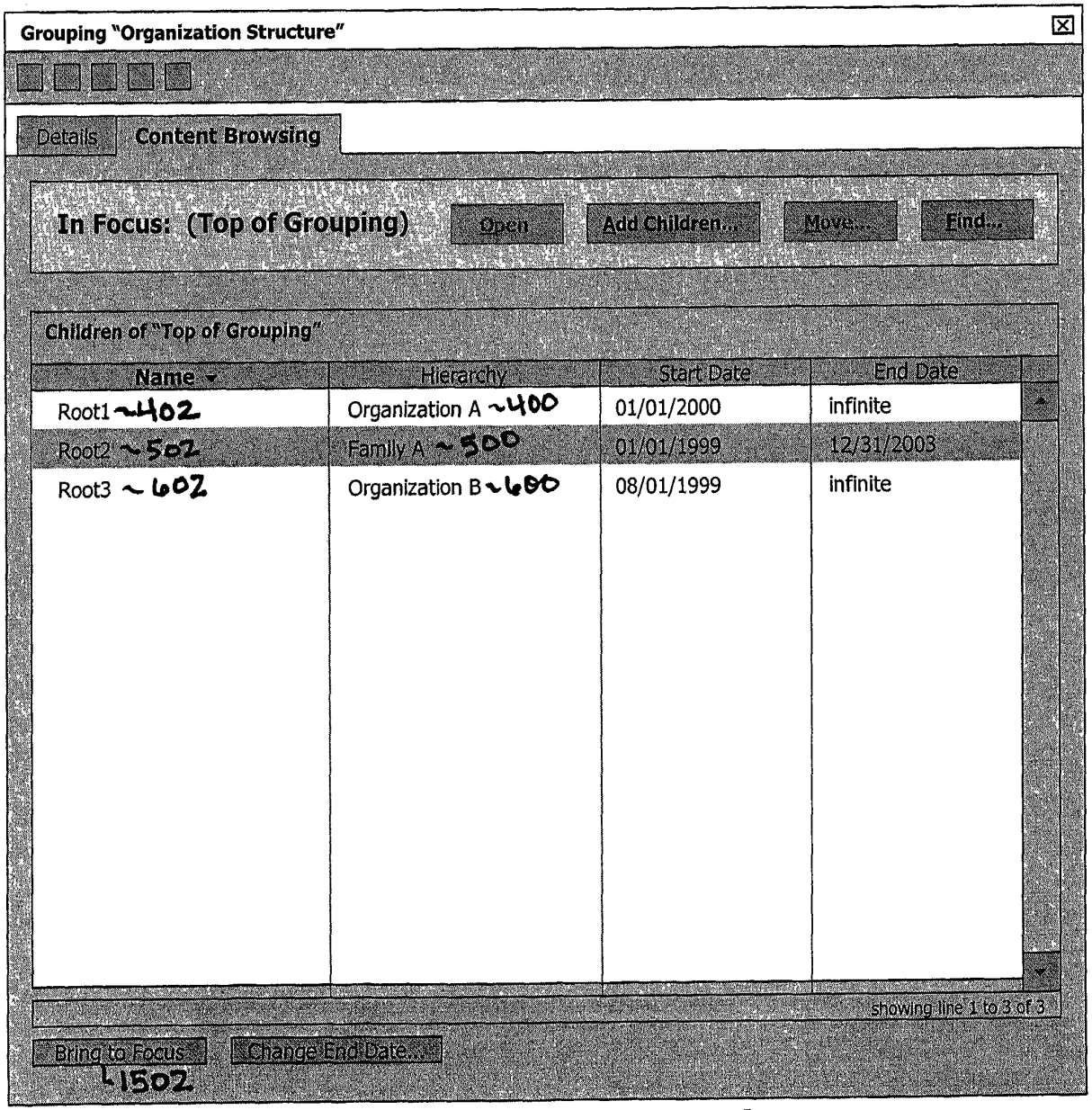

Grouping "Organization Structure"
Details
Content Browsing
In Focus: (Top of Grouping)
Open
Add Children...
Move...
Find...
Children of "Top of Grouping"
Name
Hierarchy
Start Date
End Date
Root1 ~402
Organization A ~400
01/01/2000
infinite
Root2 ~502
Family A ~500
01/01/1999
12/31/2003
Root3 ~602
Organization B ~600
08/01/1999
infinite
showing line 1 to 3 of 3
Bring to Focus
Change End Date...
1502

Fig. 15

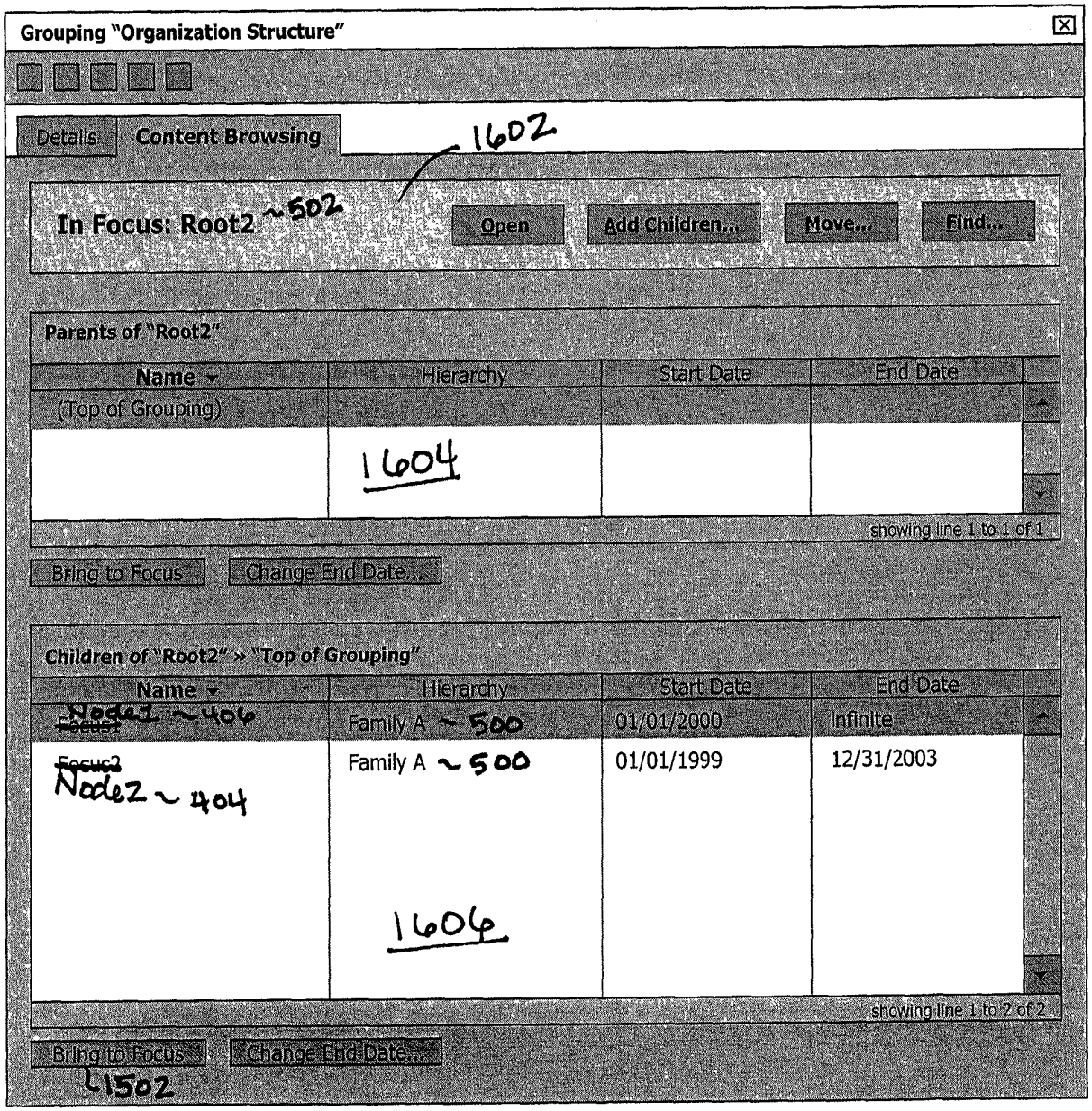
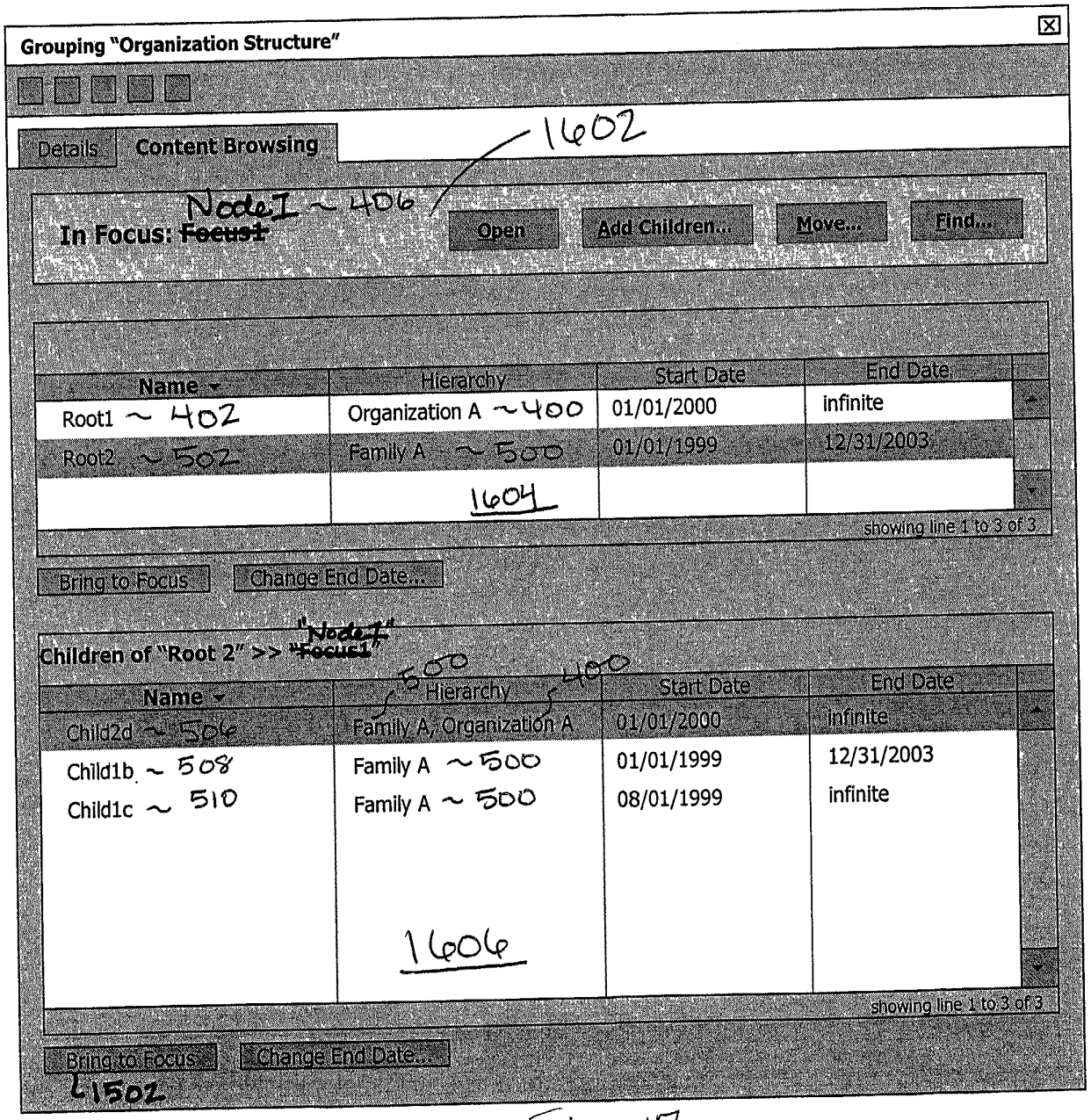


Fig. 16

Next view of hierarchy navigation control set, if double-clicked on Root2 or single-clicked and select Bring to Focus button for Root2.



Next view of hierarchy navigation control set, if double-clicked on Focus1 or single-clicked and select Bring to Focus button for Focus1.

Fig. 17

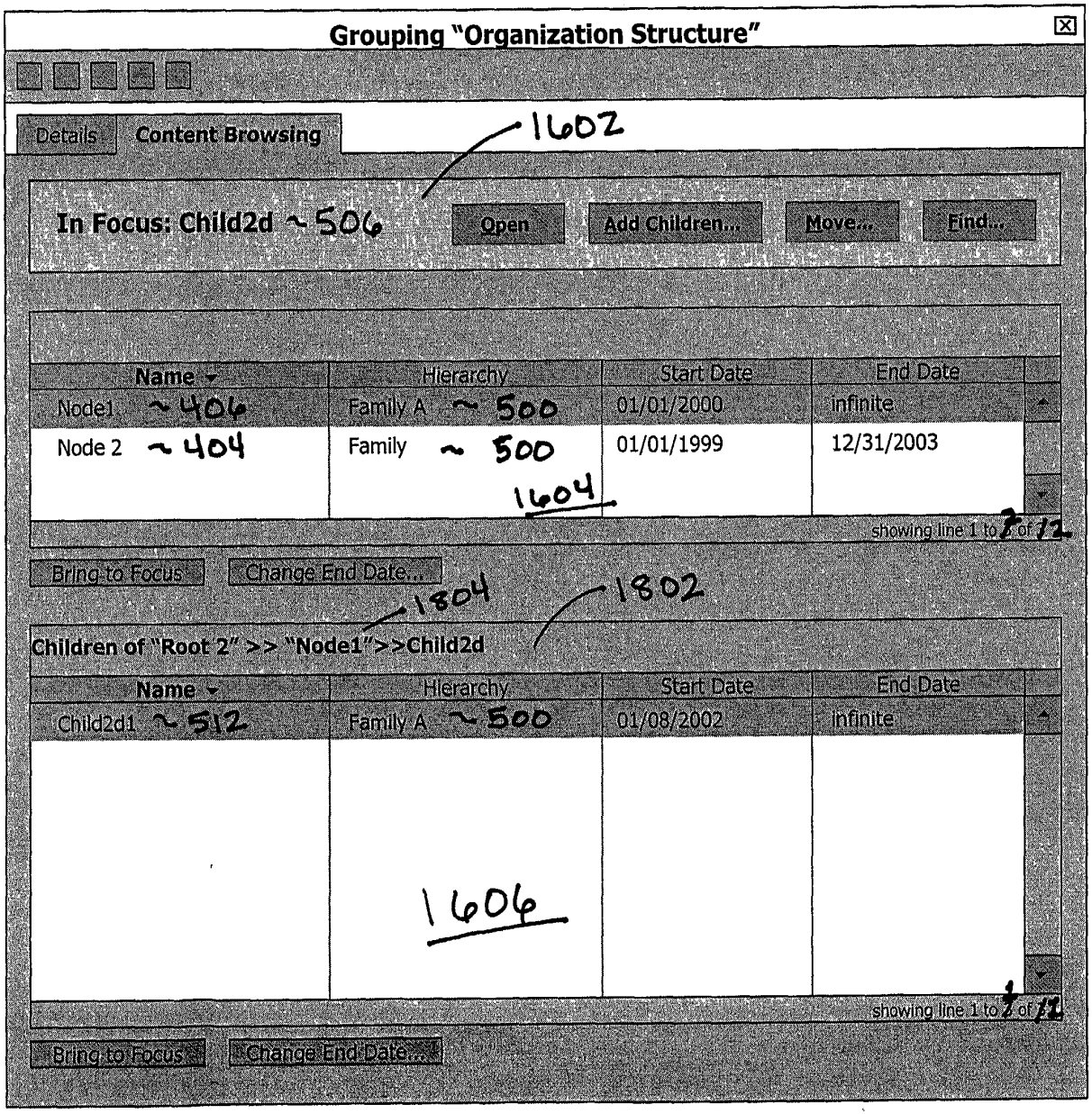

Grouping "Organization Structure"
Details
Content Browsing
1602
In Focus: Child2d ~506
Open
Add Children...
Move...
Find...
Name
Hierarchy
Start Date
End Date
Node1 ~406
Family A ~500
01/01/2000
infinite
Node 2 ~404
Family ~500
01/01/1999
12/31/2003
1604
showing line 1 to 2 of 12
Bring to Focus
Change End Date...
1804
1802
Children of "Root 2" >> "Node1">>Child2d
Name
Hierarchy
Start Date
End Date
Child2d1 ~512
Family A ~500
01/08/2002
infinite
1606
showing line 1 to 2 of 12
Bring to Focus
Change End Date...

Fig. 18

Attorney Docket No.: M-12213 US
First Inventor: Sherrill J. Packebush
Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph

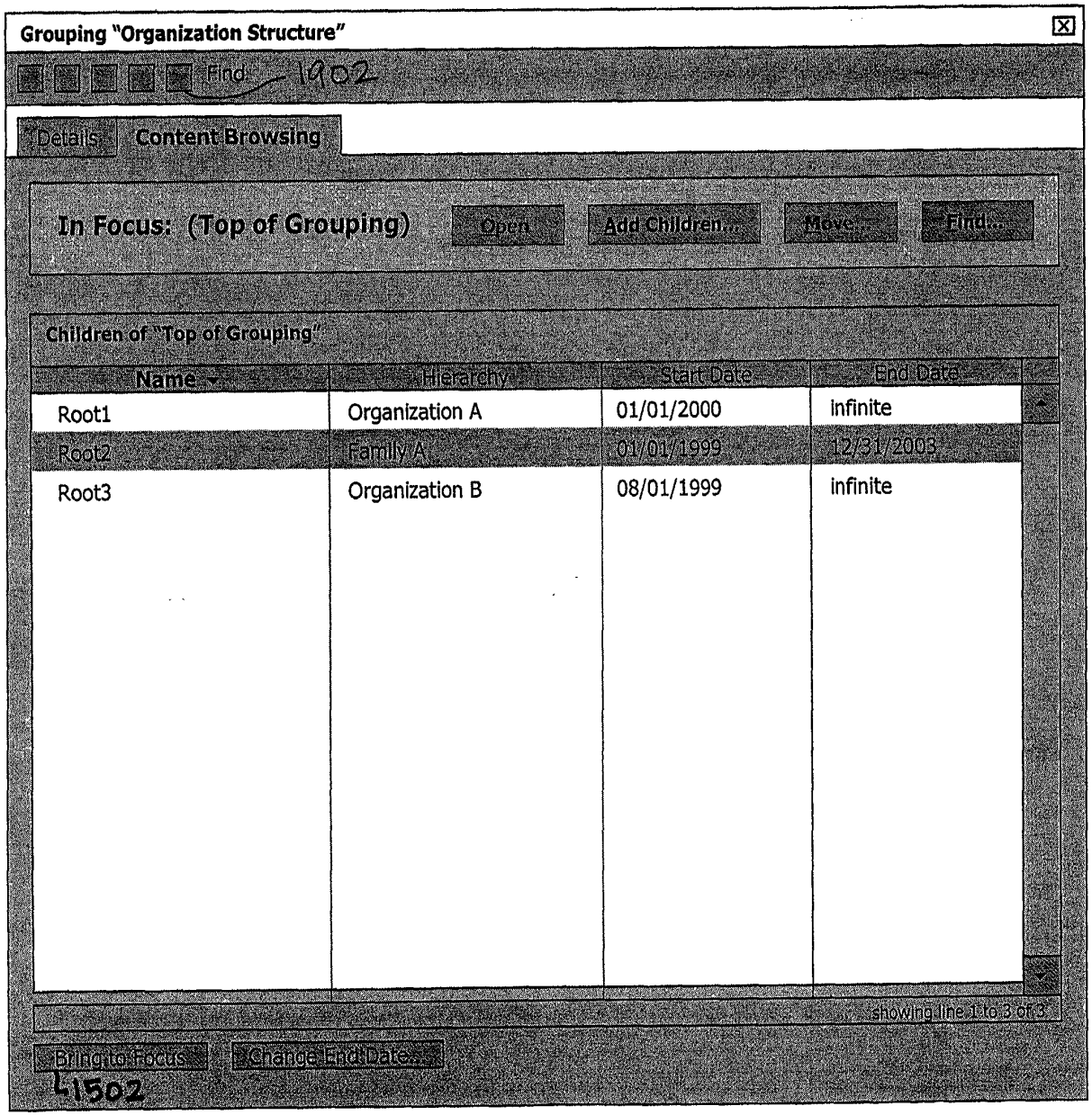


Fig. 19

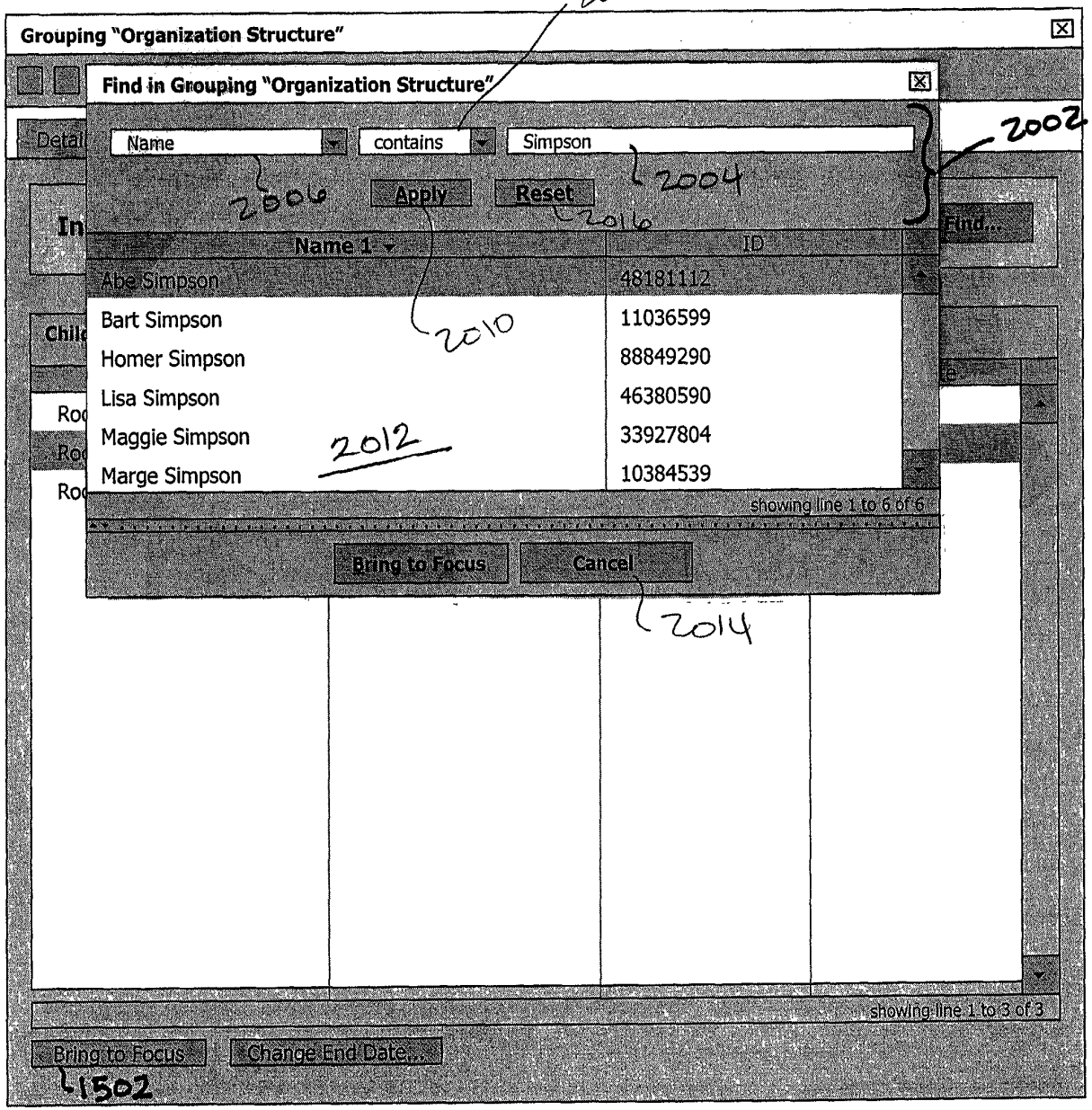
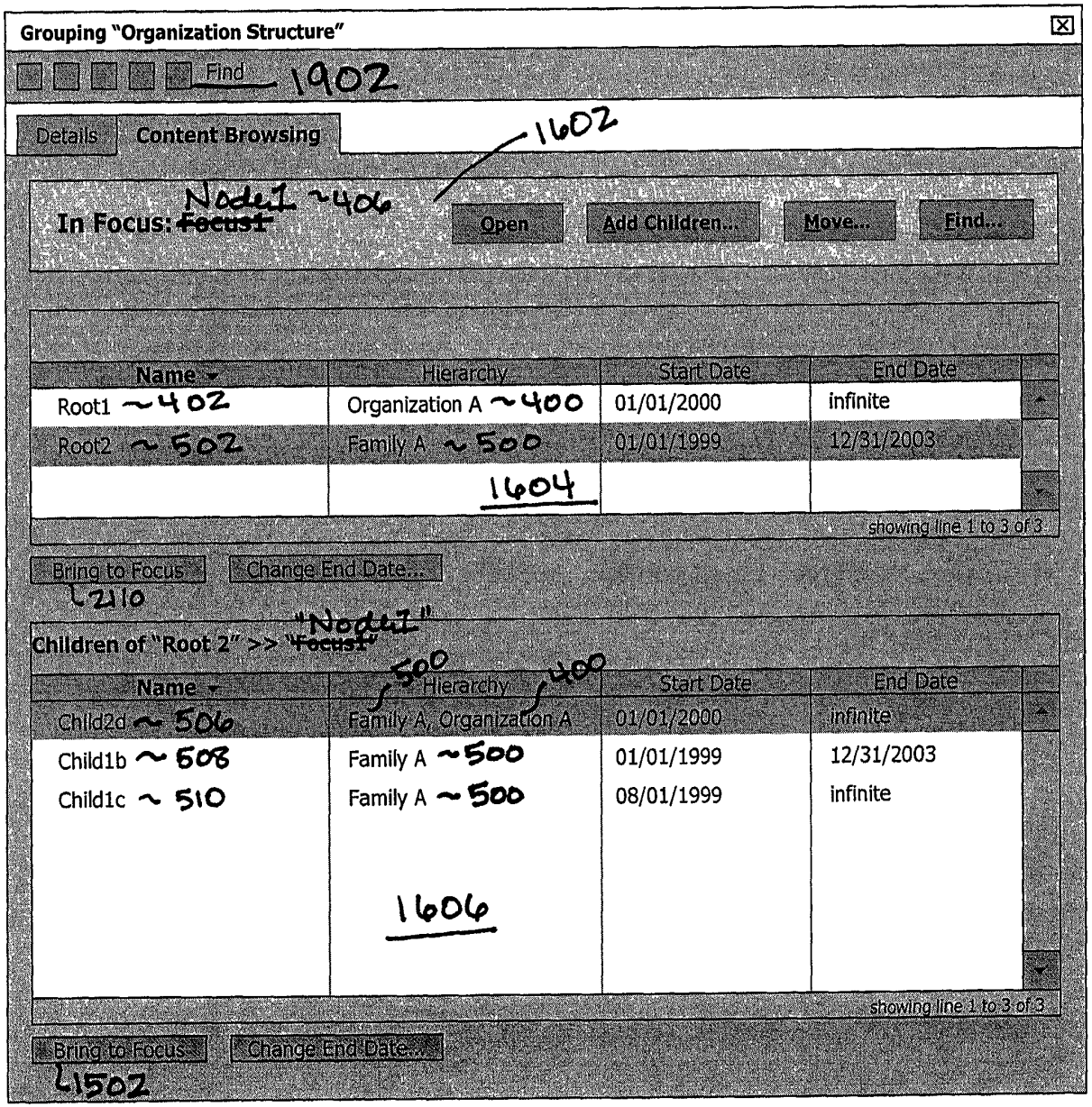


Fig. 20

Attorney Docket No.: M-12213 US
First Inventor: Sherrill J. Packebush
Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph



Next view of hierarchy navigation control set, if double-clicked on Focus1 or single-clicked and select Bring to Focus button for Focus1.

Fig. 21.

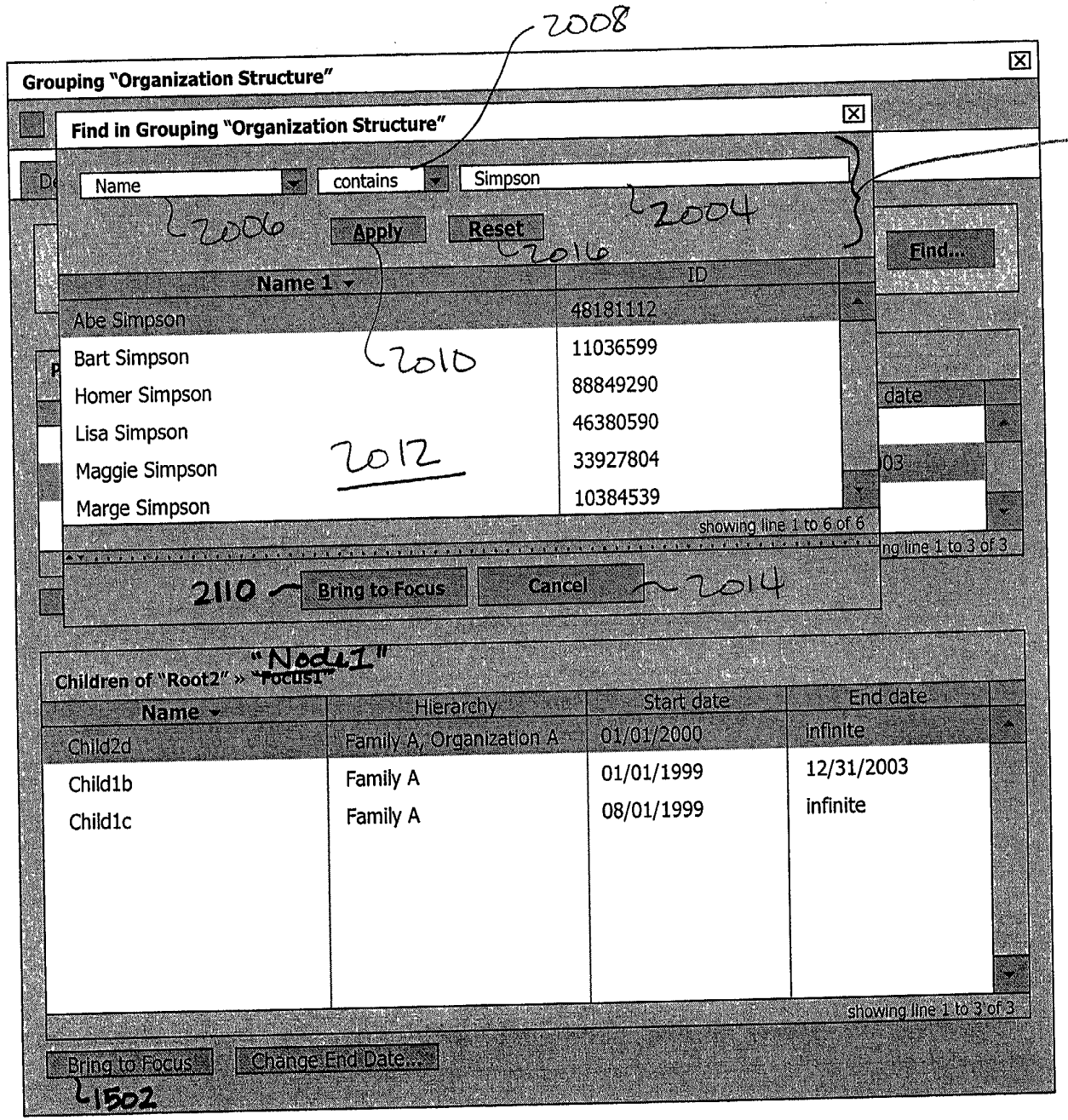


Fig. 22

View of hierarchy navigation control set, if selected Find button, so that the user can go directly to an object without navigating down the hierarchy.

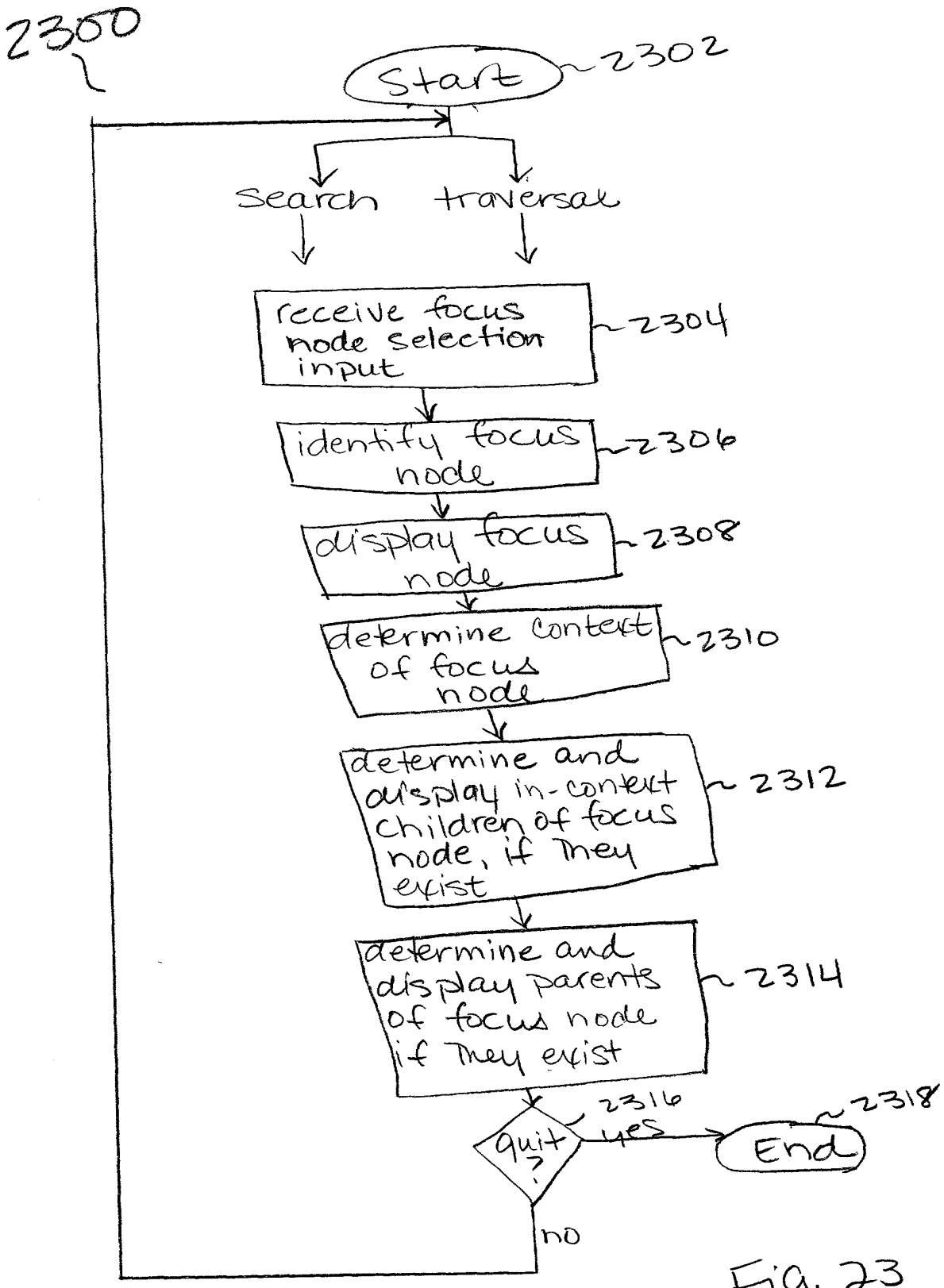
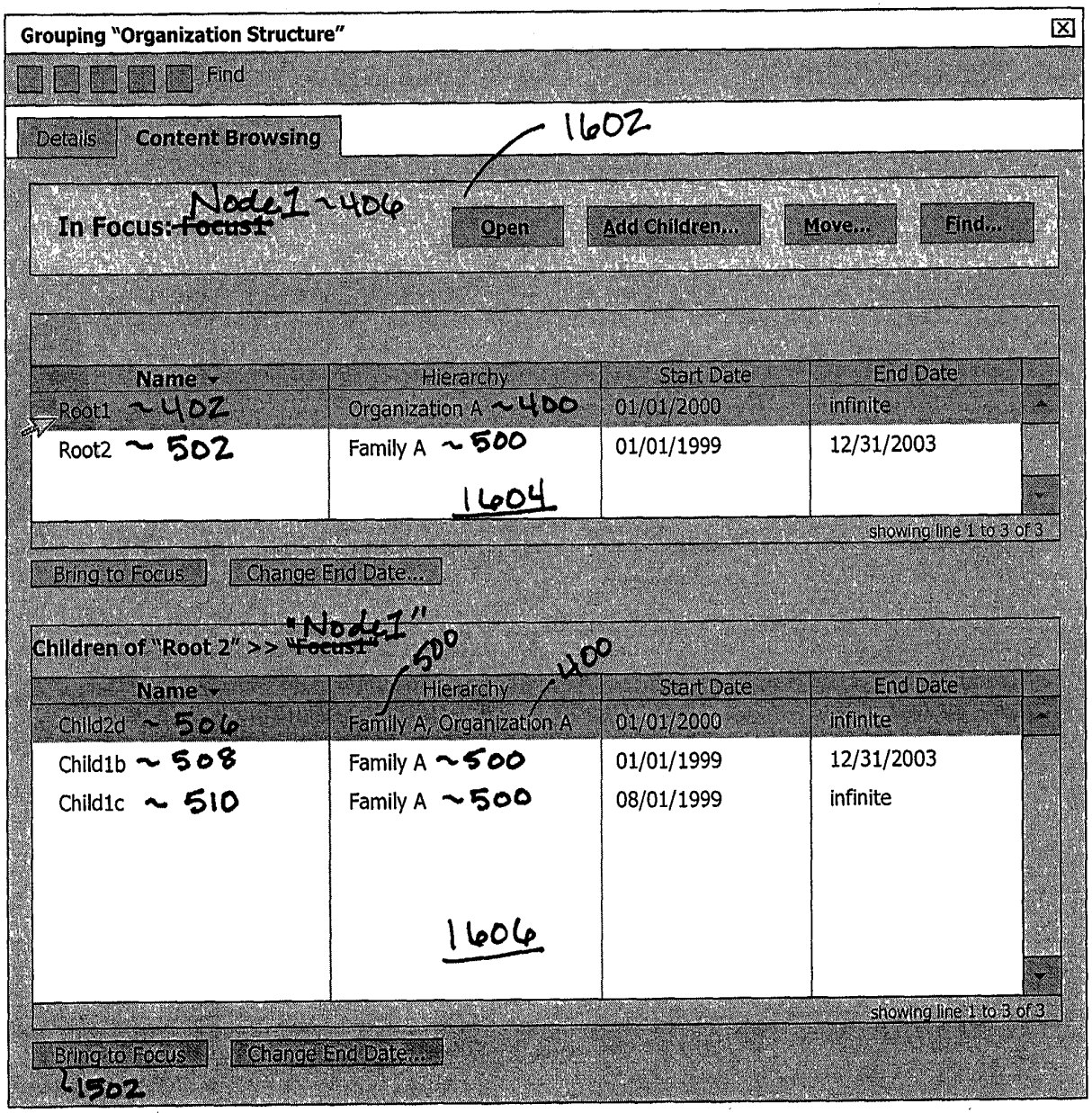

2300
Start
2302
search
traversal
receive focus node selection input
2304
identify focus node
2306
display focus node
2308
determine context of focus node
2310
determine and display in-context children of focus node, if they exist
2312
determine and display parents of focus node if they exist
2314
quit ?
2316
yes
End
2318
no

Fig. 23



Next view of hierarchy navigation control set, if double-clicked on Focus1 or single-clicked and select Bring to Focus button for Focus1.

Fig. 24

Attorney Docket No.: M-12213 US
First Inventor: Sherrill J. Packebush
Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph

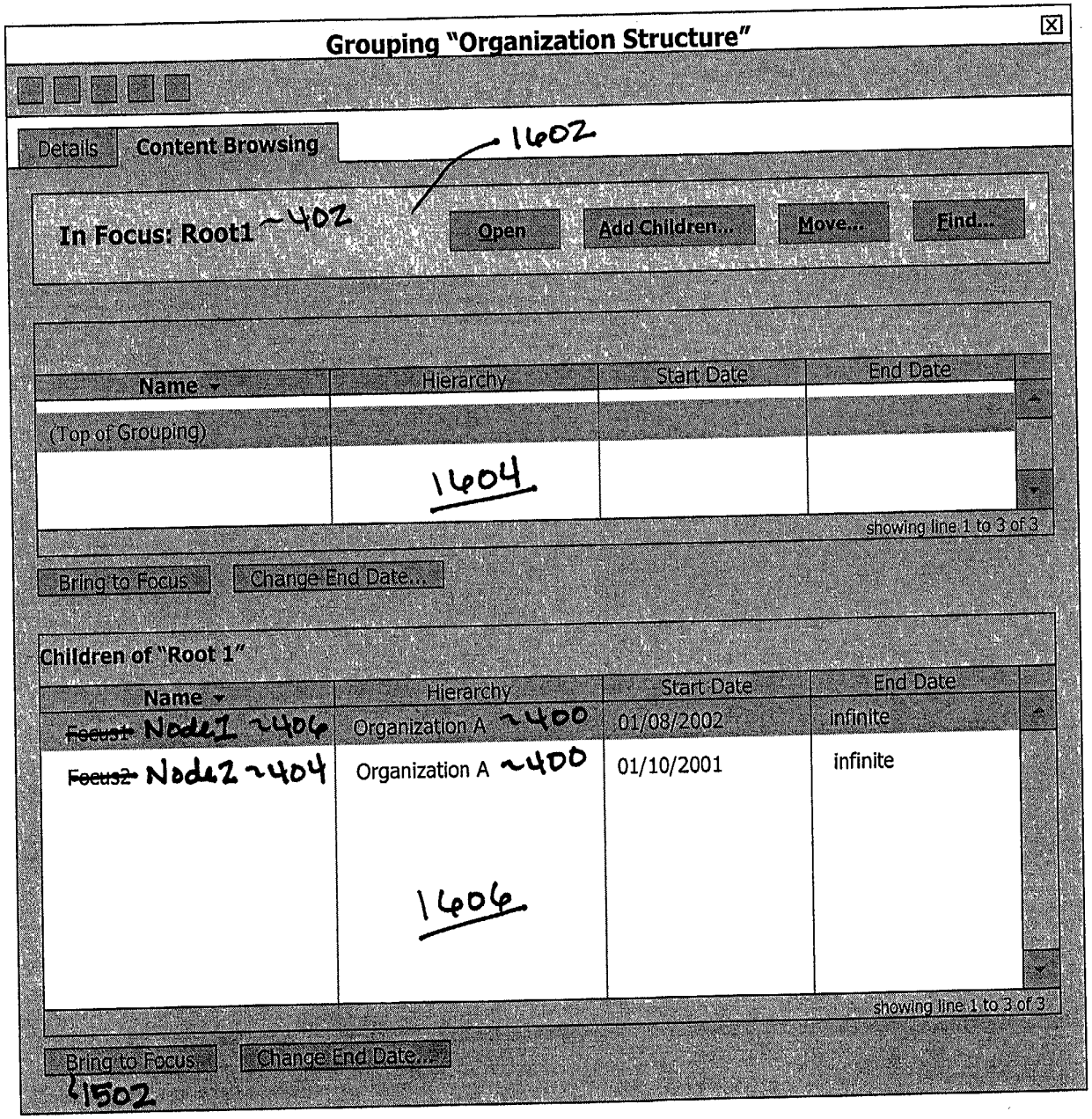
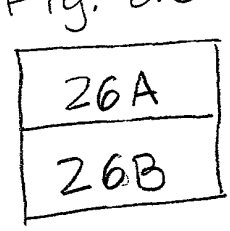


Fig. 25

First Inventor: Sherrill J. Packebush
Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph

Fig. 26



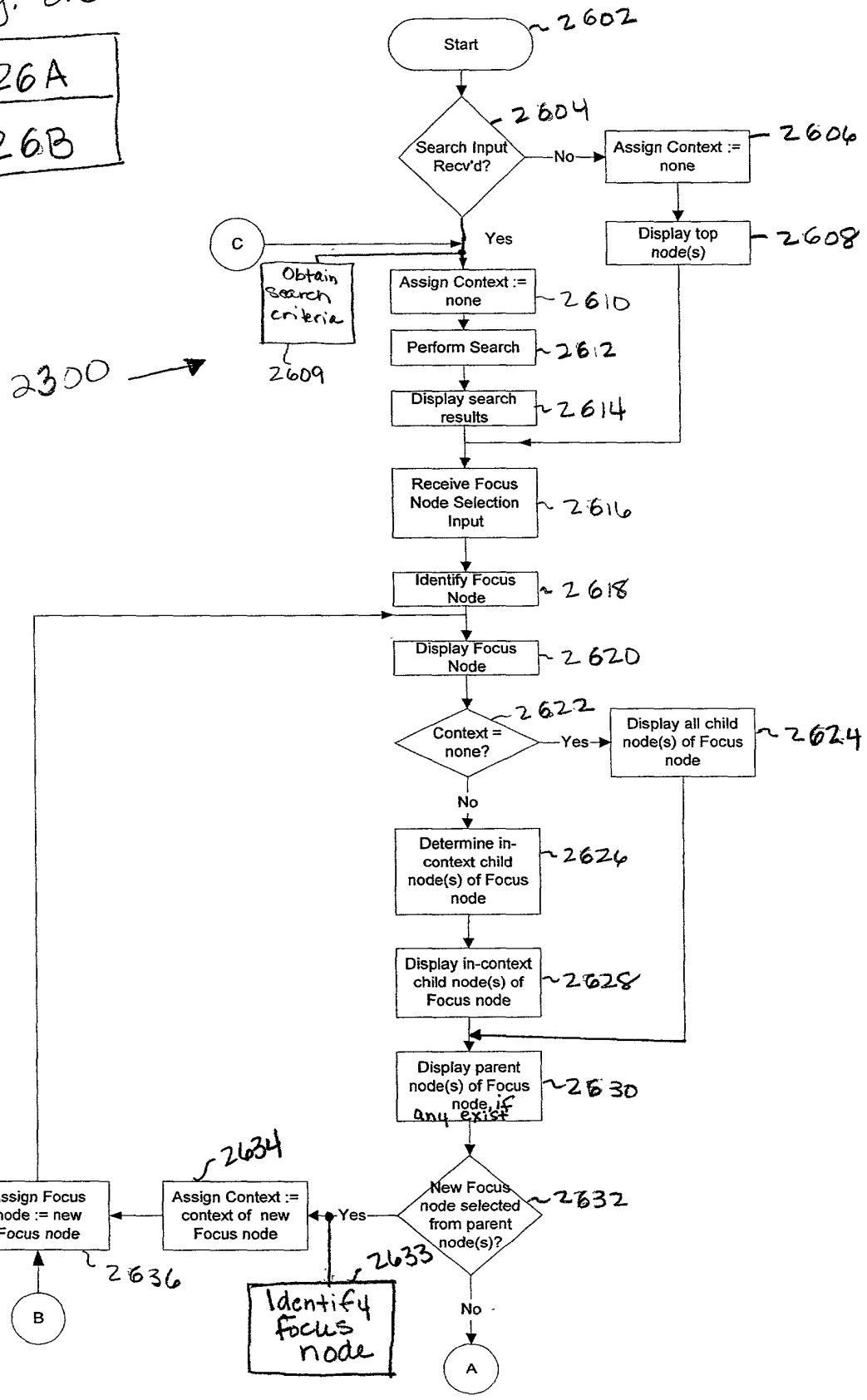


Fig. 26A

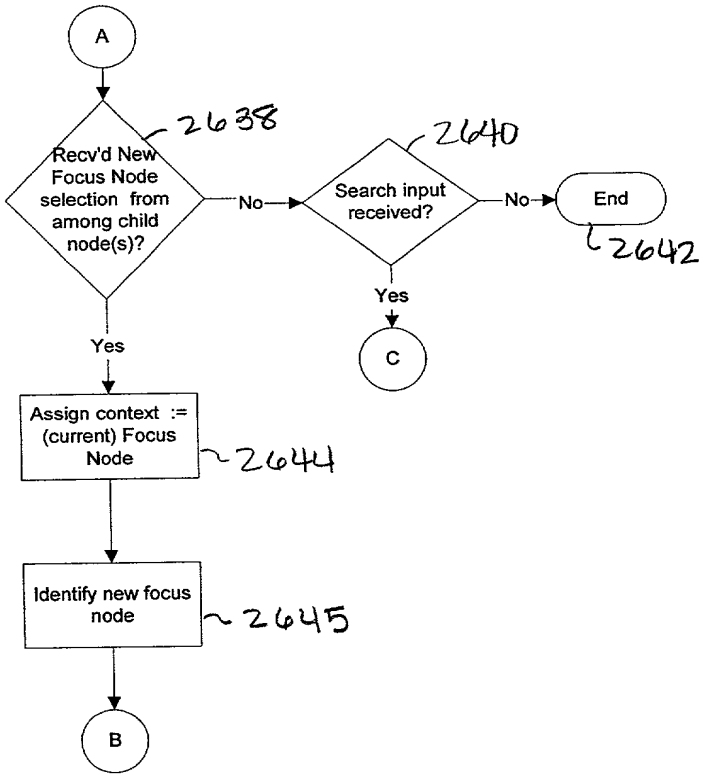

A
Recv'd New Focus Node selection from among child node(s)?
2638
No
Search input received?
2640
No
End
2642
Yes
C
Yes
Assign context := (current) Focus Node
2644
Identify new focus node
2645
B

Fig. 26B

Search for Hierarchy

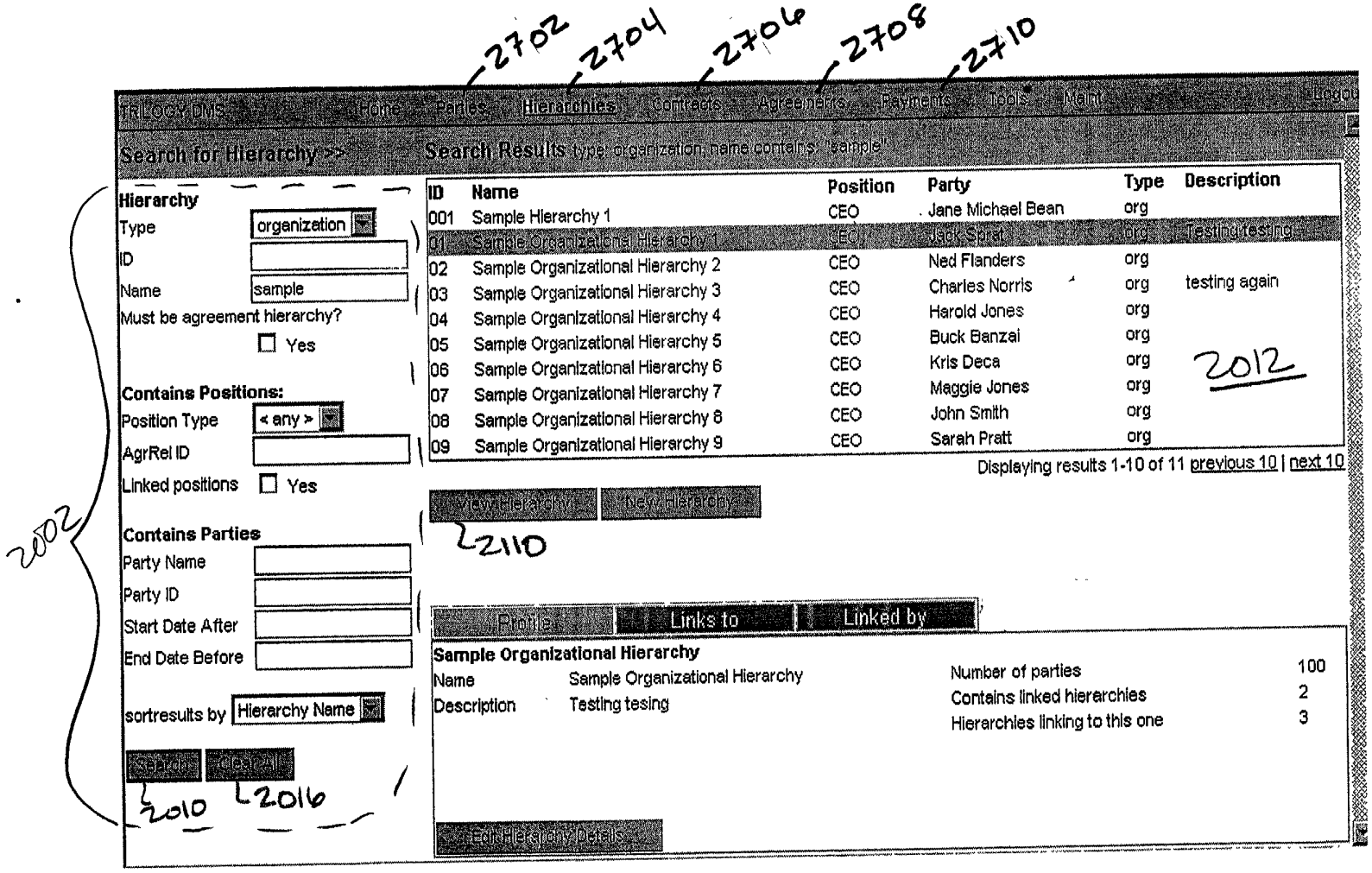


Fig. 27

Attorney Docket No.: M-12213 US
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Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph

View Hierarchy - linked items

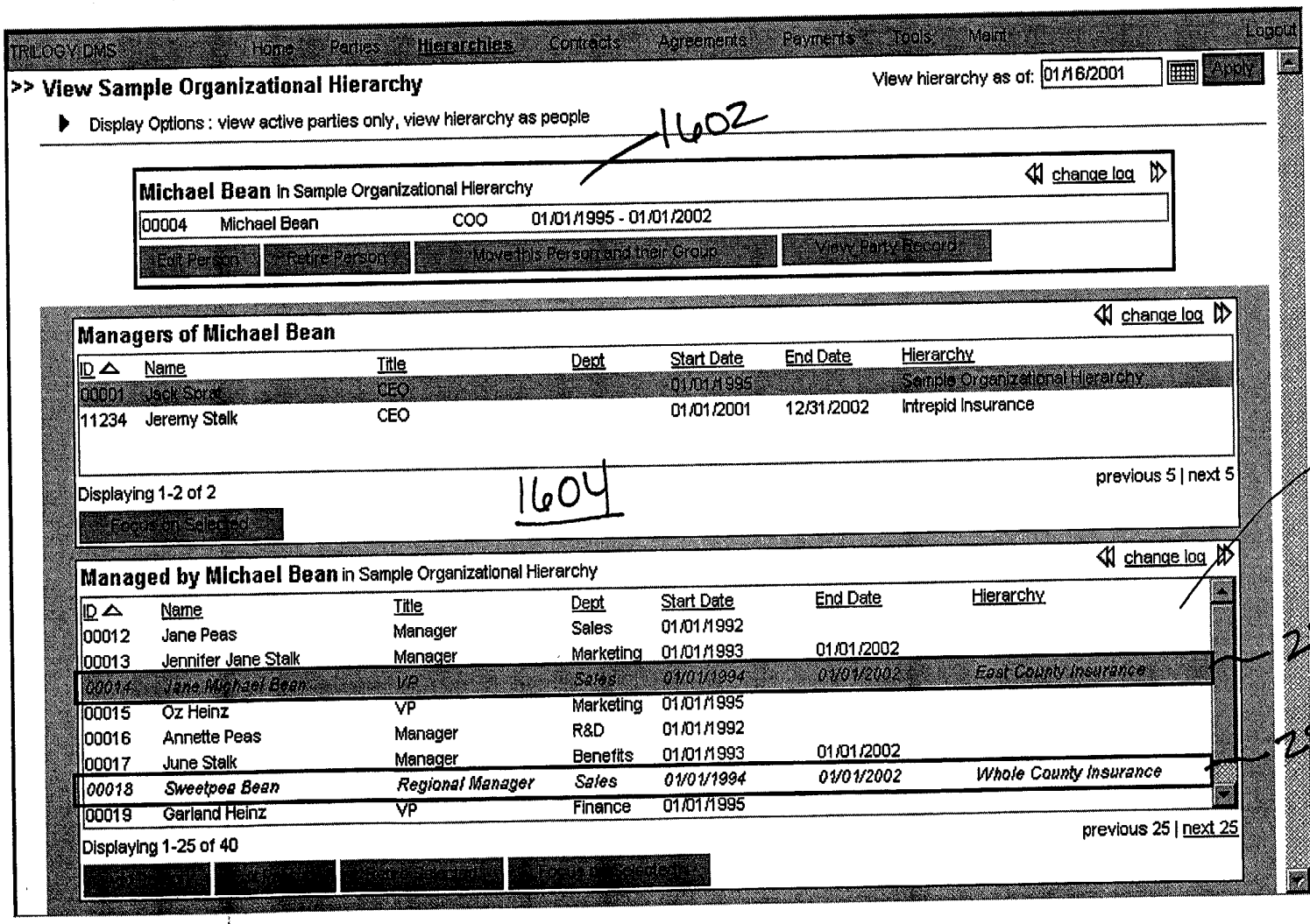

Fig. 28

Attorney Docket No.: M-12213 US
First Inventor: Sherrill J. Packebush
Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph

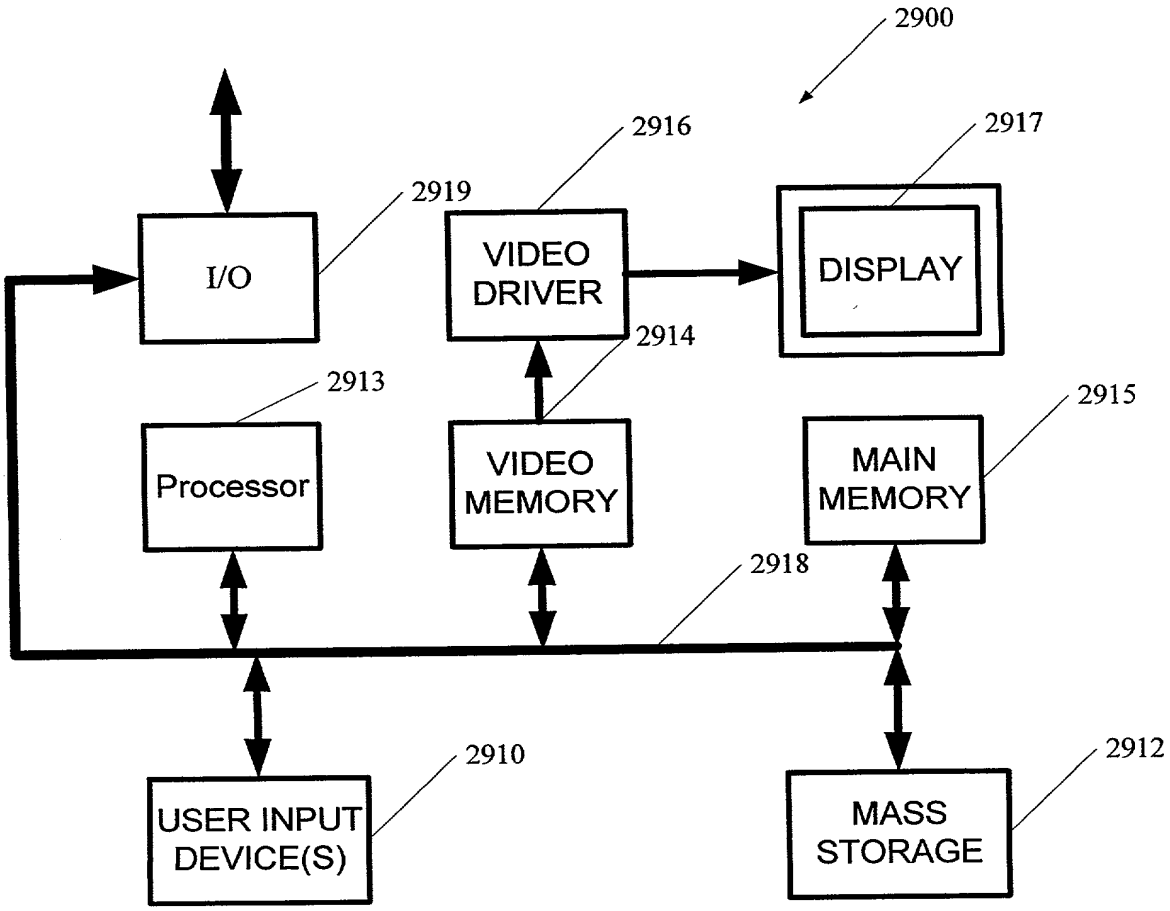
2900
2916
2917
2919
I/O
VIDEO DRIVER
DISPLAY
2914
2913
2915
Processor
VIDEO MEMORY
MAIN MEMORY
2918
2910
2912
USER INPUT DEVICE(S)
MASS STORAGE

Figure 29

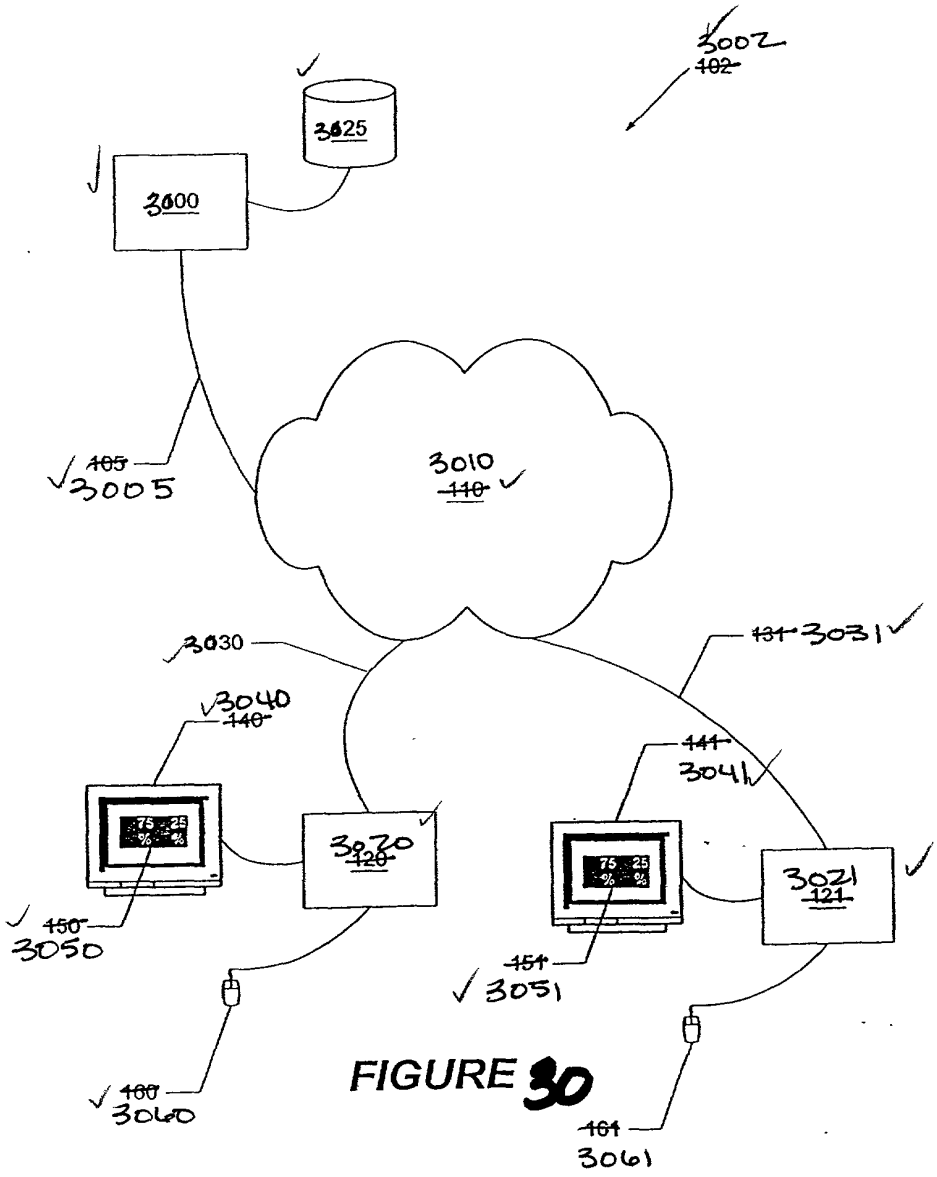
3002
102
3025
3000
3010
110
105
3005
3030
3031
131
3040
140
141
3041
3020
120
3021
121
150
3050
151
3051
160
3060
161
3061

FIGURE 3D

Search for Hierarchy - Locate Party/Position

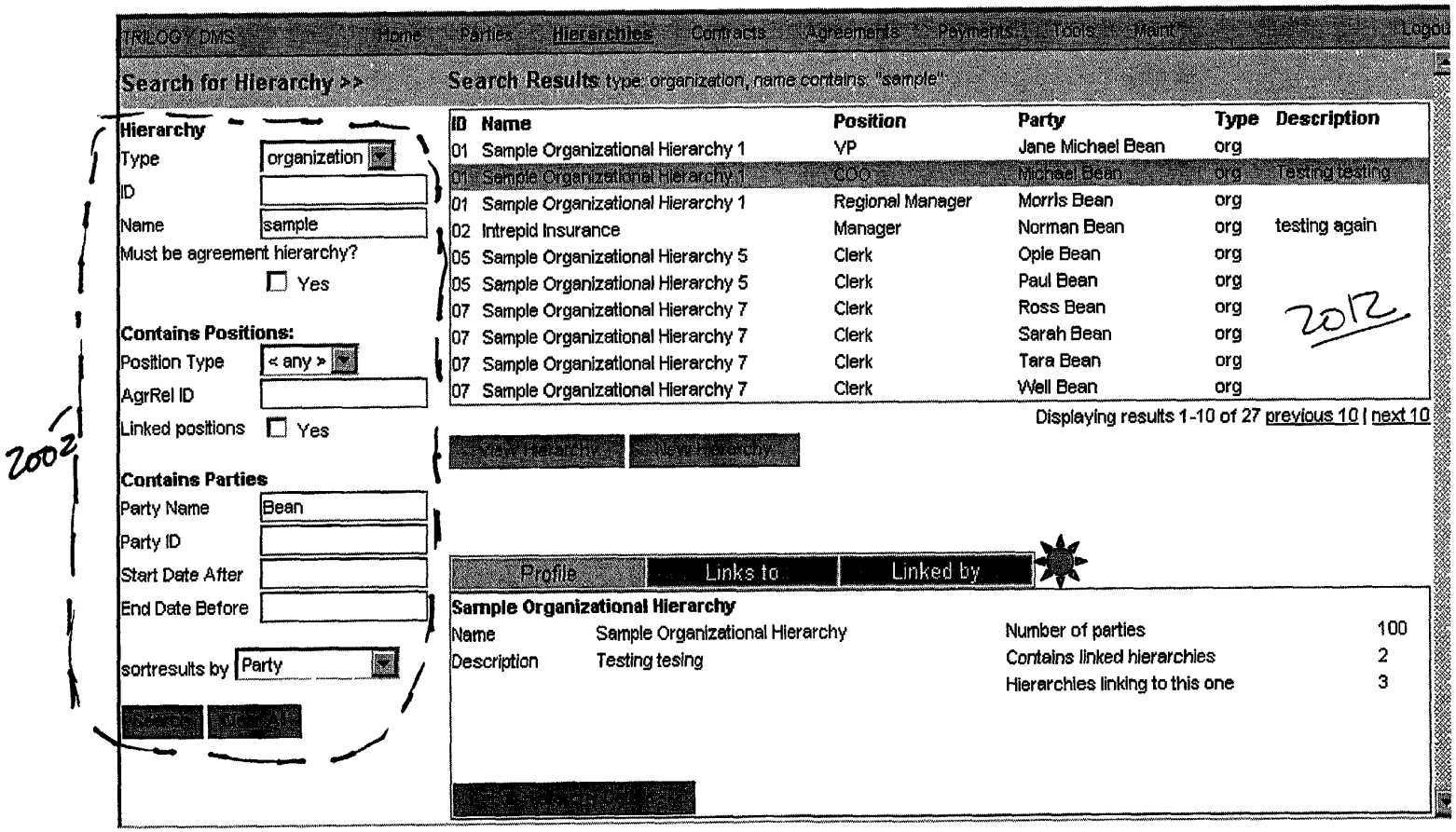

Fig. 31

Attorney Docket No.: M-12213 US
First Inventor: Sherrill J. Packebush
Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph

View Hierarchy - display options

TRILOGY DMS | Home | Parties | Hierarchies | Contracts | Agreements | Payments | Tools | Maint | Logout

>> View Sample Organizational Hierarchy

View hierarchy as of: 01/16/2001 Apply

Display Options

View hierarchy as: Titles People

Apply

3202a 3202b

Michael Bean in Sample Organizational Hierarchy — change log

00004	Michael Bean	COO	01/01/1995 - 01/01/2002

Edit Person | Retire Person | Move this Person and their Group | View Party Record

Managers of Michael Bean — change log

ID	Name	Title	Dept	Start Date	End Date	Hierarchy
00001	Jack Sprat	CEO		01/01/1995		Sample Organizational Hierarchy
11234	Jeremy Stalk	CEO		01/01/2001	12/31/2002	Intrepid Insurance

1604

previous 5 | next 5

Displaying 1-2 of 2

Focus on Selected

Managed by Michael Bean in Sample Organizational Hierarchy — change log

ID	Name	Title	Dept	Start Date	End Date	Hierarchy
00012	Jane Peas	Manager	Sales	01/01/1992		
00013	Jennifer Jane Stalk	Manager	Marketing	01/01/1993	01/01/2002	
00014	*Jane Michael Bean*	*VP*	*Sales*	*01/01/1994*	*01/01/2002*	*East County Insurance*
00015	Oz Heinz	VP	Marketing	01/01/1995		
00016	Annette Peas	Manager	R&D	01/01/1992		
00017	June Stalk	Manager	Benefits	01/01/1993	01/01/2002	
00018	*Sweetpea Bean*	*Regional Manager*	*Sales*	*01/01/1994*	*01/01/2002*	*Whole County Insurance*
00019	Garland Heinz	VP	Finance	01/01/1995		

1606

Fig. 32

Attorney Docket No.:
First Inventor:
Title:
M-12213 US
Sherrill J. Packebush
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View Hierarchy - view by Title

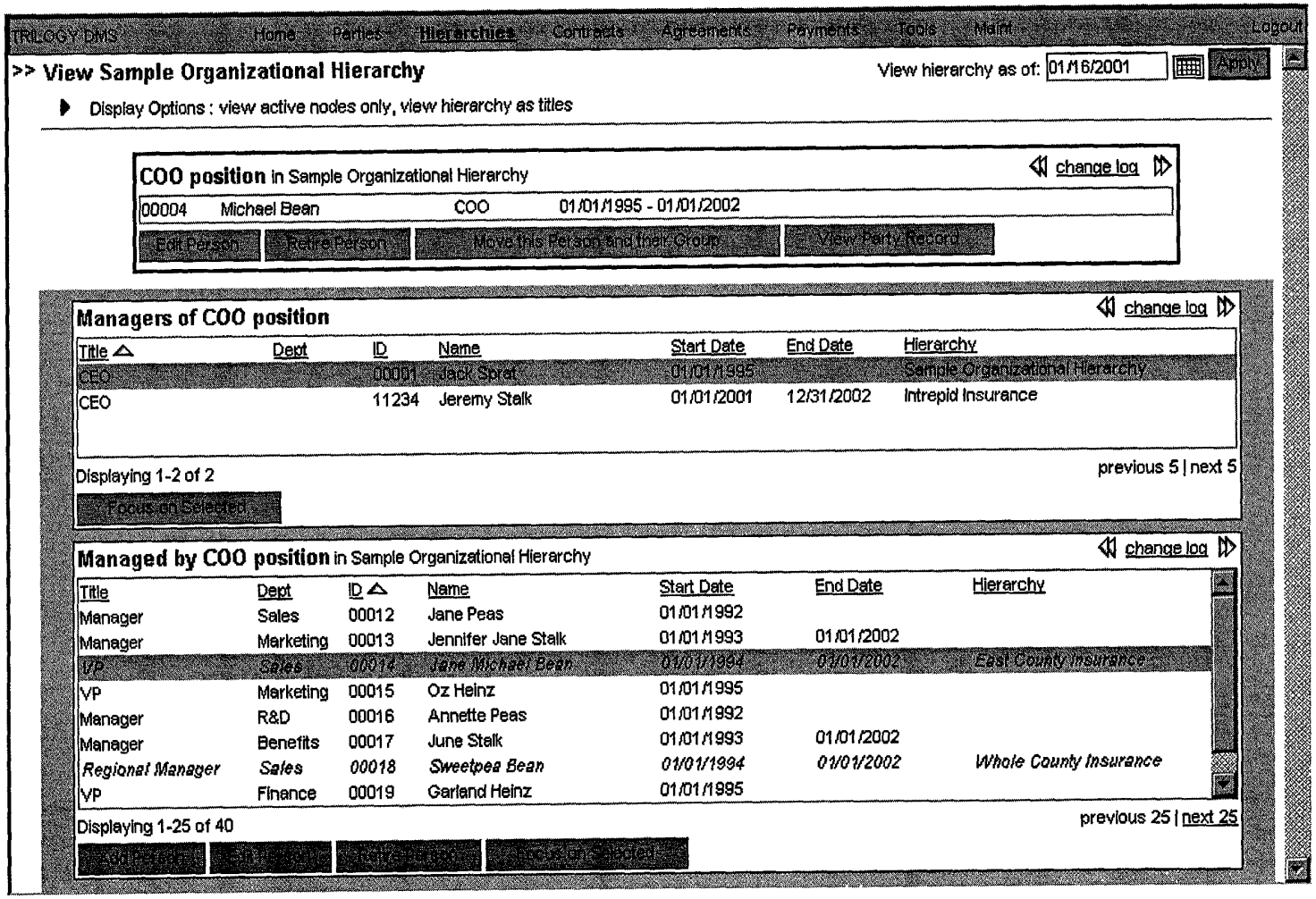

Fig. 33

Attorney Docket No.: M-12213 US
First Inventor: Sherrill J. Packebush
Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph

Add Position/Party - step 1

TRILOGY DMS | Home | Parties | Hierarchies | Contracts | Agreements | Payments | Tools | Maint | Logout

>>

Add Position/Person

1. Add To

Hierarchy	Sample Organizational Hierarchy
Under	Michael Bean
Start Date	
End Date	

2. Position

Position Type	< select one >
Position Name	
Position Description	

3. Person

Use Placeholder	Yes
Party ID	
First Name	Daniel
Last Name	Bean

Submit Cancel

Fig. 34a

Attorney Docket No.: M-12213 US
First Inventor: Sherrill J. Packebush
Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph

Add Position/Party - step 2

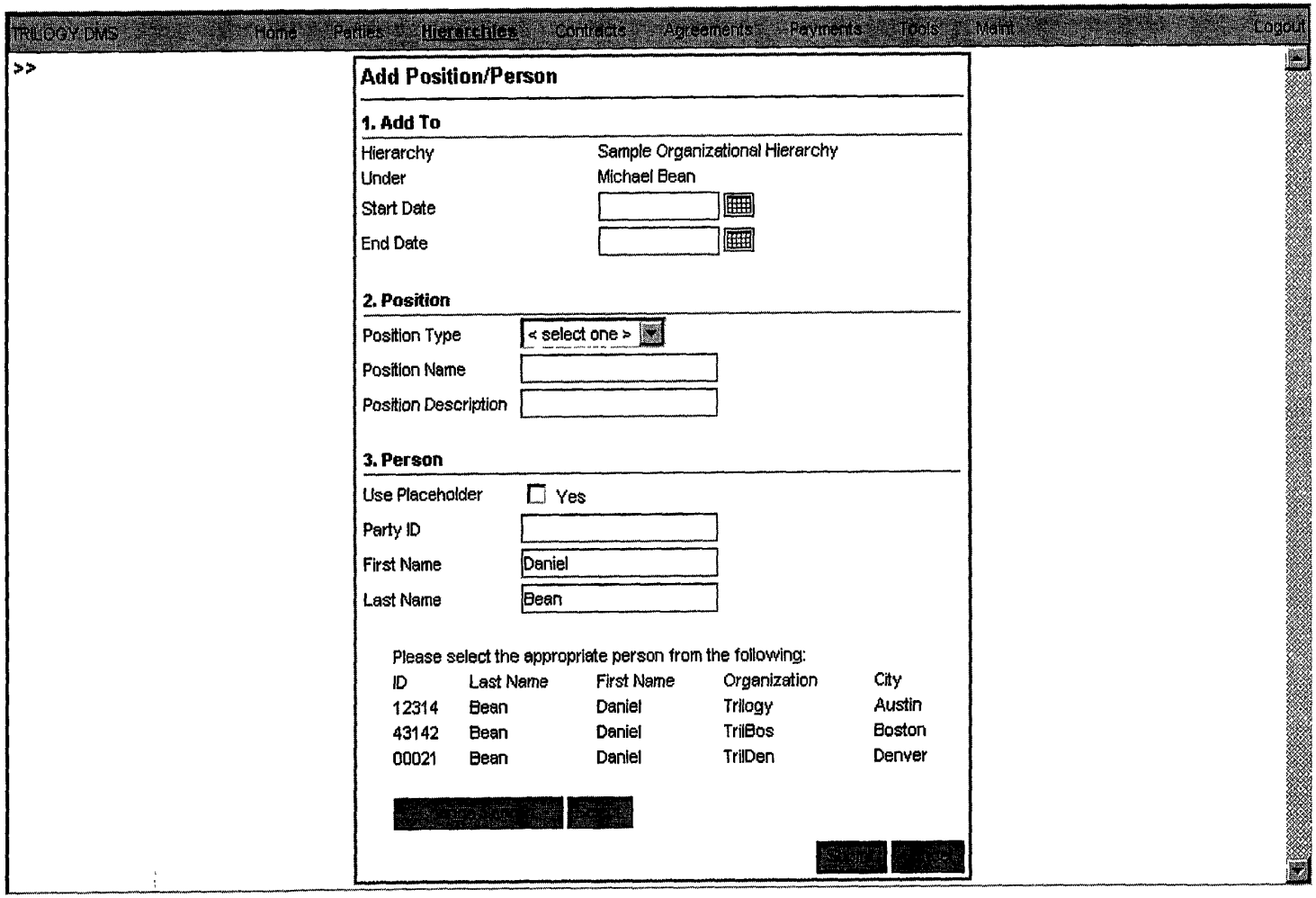

Fig. 34b

Attorney Docket No.: M-12213 US
First Inventor: Sherrill J. Packebush
Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph

Edit Position/Party

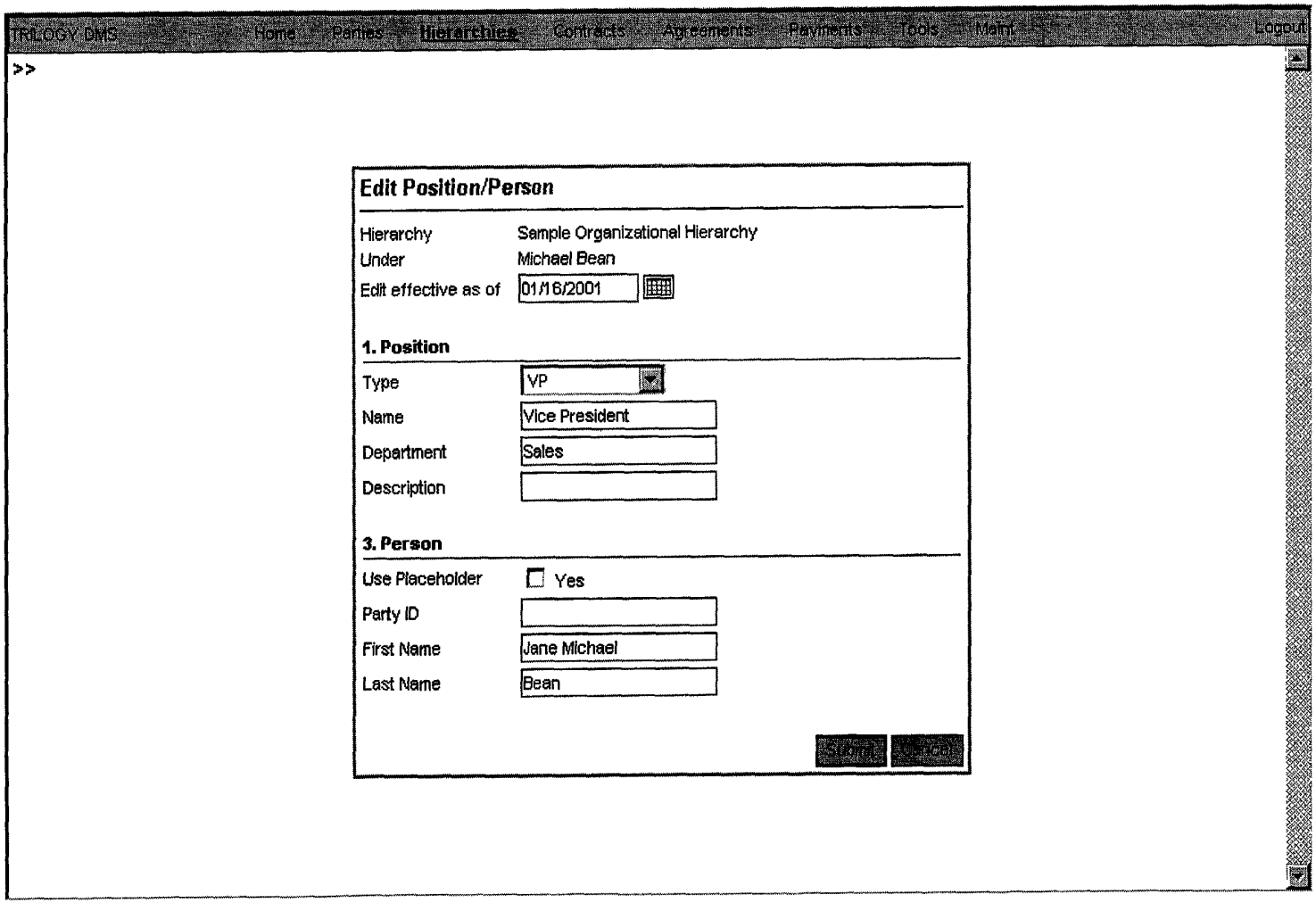

Fig. 35

Attorney Docket No.: M-12213 US
First Inventor: Sherrill J. Packebush
Title: System and Method For An Interface To Provide Visualization And Navigation Of A Directed Graph

Retire Party

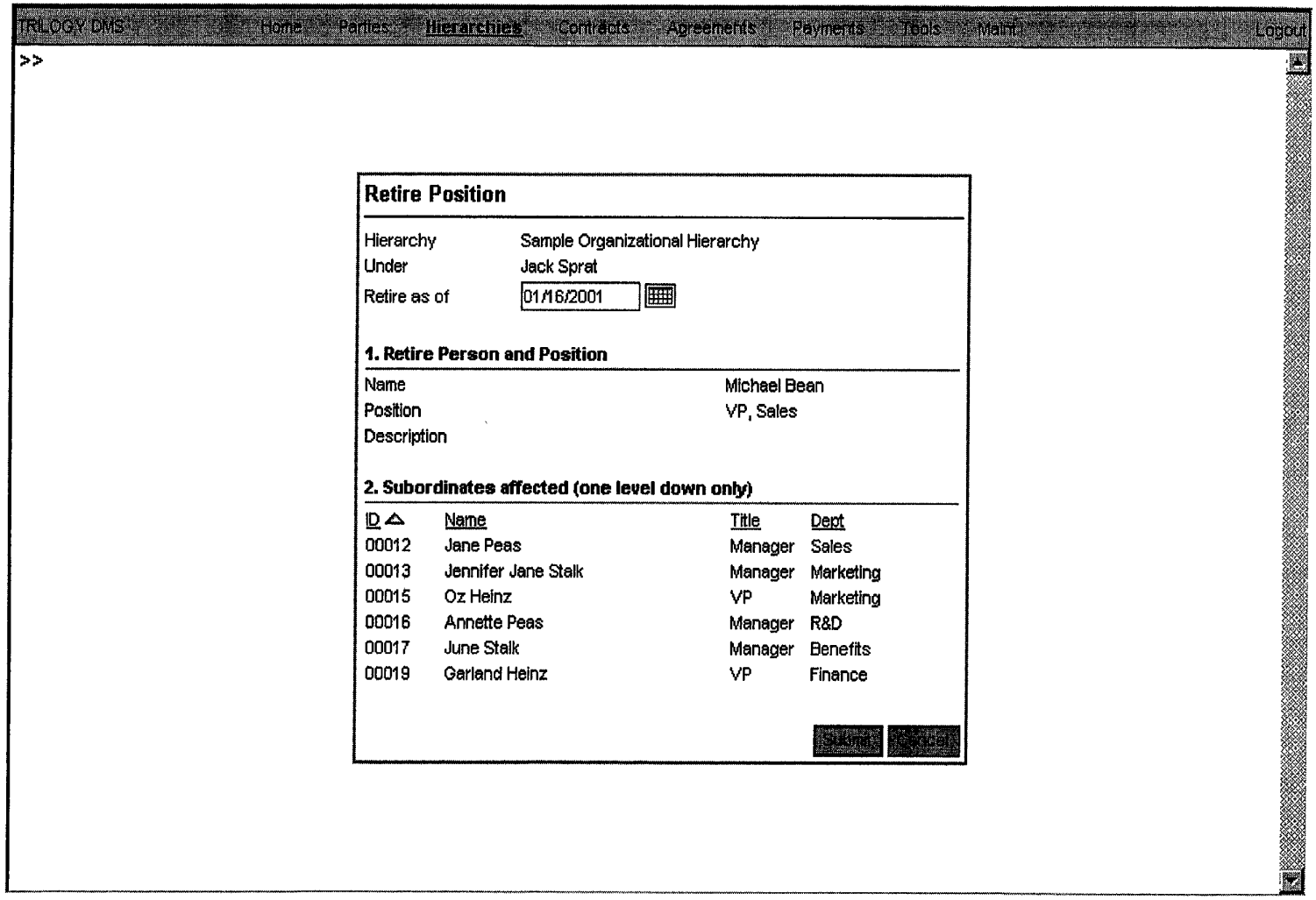

Fig. 36

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Move Subtree

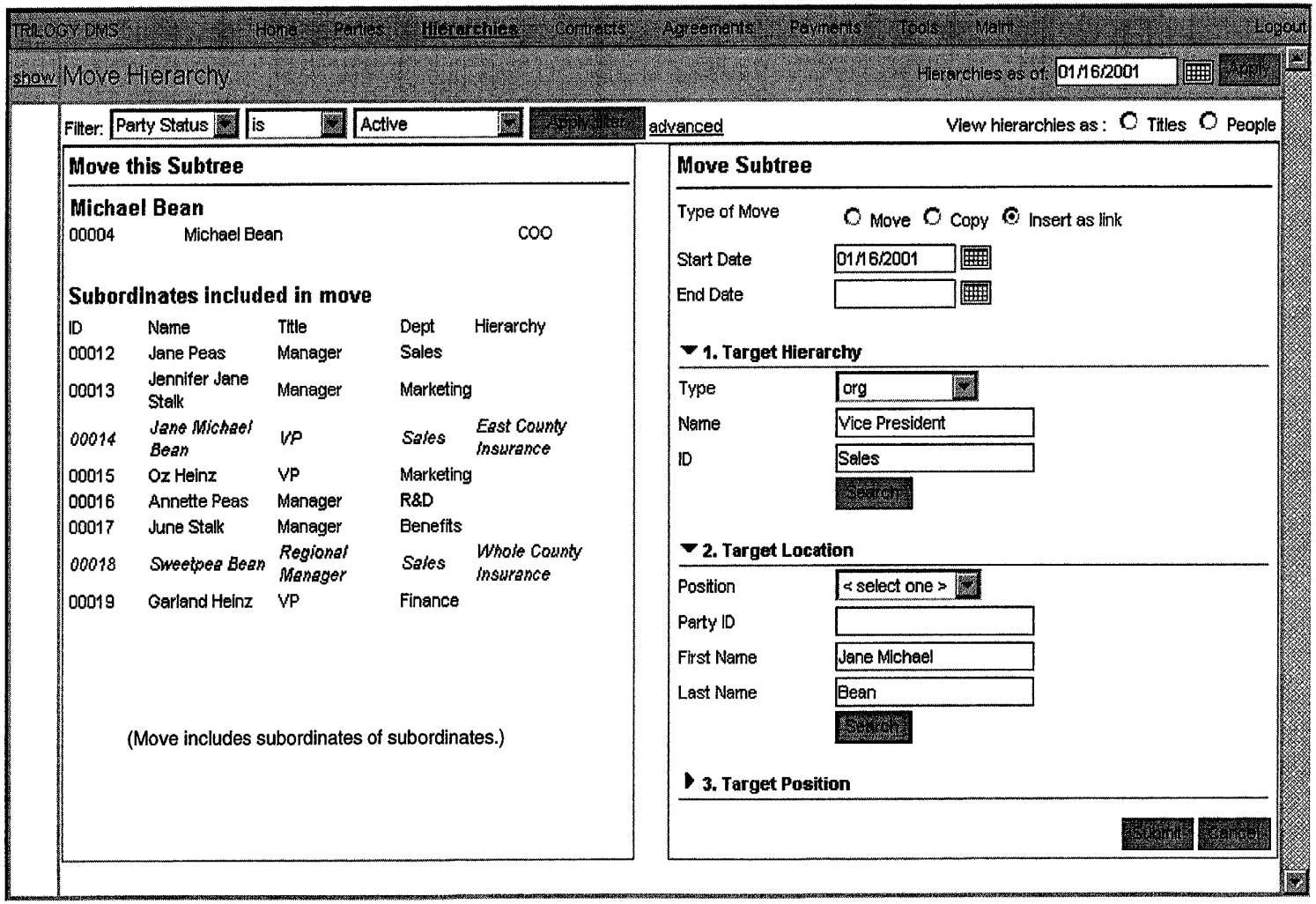

Fig. 37

Attorney Docket No.: M-12213 US
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